PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

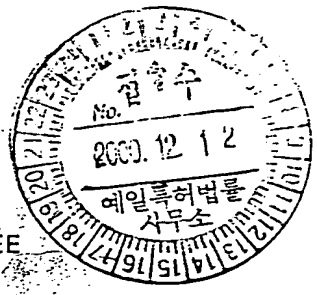
PCT

NOTIFICATION CONCERNING SUBMISSION OR TRANSMITTAL OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

To:

LEE, Duckrog
Yeil Building
2nd floor
700-19, Yorksam-dong
Kangnam-ku
Seoul 135-080
RÉPUBLIQUE DE CORÉE



Date of mailing (day/month/year) 15 November 2000 (15.11.00)	
Applicant's or agent's file reference YL000714PCT	**IMPORTANT NOTIFICATION**
International application No. PCT/KR00/00773	International filing date (day/month/year) 15 July 2000 (15.07.00)
International publication date (day/month/year) Not yet published	Priority date (day/month/year) 16 July 1999 (16.07.99)
Applicant KIM, Hongil et al	

1. The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).

2. This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.

3. An asterisk(*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

4. The letters **"NR"** appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

Priority date	Priority application No.	Country or regional Office or PCT receiving Office	Date of receipt of priority document
16 July 1999 (16.07.99)	1999/28824	KR	19 Sept 2000 (19.09.00)
02 Sept 1999 (02.09.99)	1999/37022	KR	19 Sept 2000 (19.09.00)
14 Sept 1999 (14.09.99)	1999/39206	KR	19 Sept 2000 (19.09.00)

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer

Magda BOUACHA

Telephone No. (41-22) 338.83.38

PCT REQUEST

YL000714PCT

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0	**For receiving Office use only**	
0-1	International Application No.	
0-2	International Filing Date	
0-3	Name of receiving Office and "PCT International Application"	
0-4	**Form - PCT/RO/101 PCT Request**	
0-4-1	Prepared using	PCT-EASY Version 2.91 (updated 01.07.2000)
0-5	**Petition** The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty	
0-6	**Receiving Office (specified by the applicant)**	Korean Industrial Property Office (RO/KR)
0-7	**Applicant's or agent's file reference**	YL000714PCT
I	**Title of invention**	REAL TIME INFORMATION SERVICE SYSTEM USING TITLE BAR, TASK BAR AND TRAY CLOCK OF WINDOWS
II	**Applicant**	
II-1	This person is:	applicant and inventor
II-2	Applicant for	all designated States
II-4	Name (LAST, First)	KIM, Hongil
II-5	Address:	7-1402, Woojung APT, Songwoo-ri, Soheul-eup, Pochun-gun 487-820 Kyonggi-do Republic of Korea
II-6	State of nationality	KR
II-7	State of residence	KR
II-8	Telephone No.	82-2-567-1890
II-9	Facsimile No.	82-2-568-8882
II-10	e-mail	hikim@rood.daejin.ac.kr
III-1	**Applicant and/or inventor**	
III-1-1	This person is:	applicant and inventor
III-1-2	Applicant for	US only
III-1-4	Name (LAST, First)	LEE, Hyoungchan
III-1-5	Address:	8-409, Samho Garden Mansion, #30-2, Banpo-dong, Seocho-gu 137-040 Seoul Republic of Korea
III-1-6	State of nationality	KR
III-1-7	State of residence	KR

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III-2	**Applicant and/or inventor**	
III-2-1	This person is:	applicant and inventor
III-2-2	Applicant for	US only
III-2-4	Name (LAST, First)	CHUNG, Hunsuk
III-2-5	Address:	102-1211, Mido APT, Daechi-dong, Kangnam-gu 135-775 Seoul Republic of Korea
III-2-6	State of nationality	KR
III-2-7	State of residence	KR
III-3	**Applicant and/or inventor**	
III-3-1	This person is:	applicant and inventor
III-3-2	Applicant for	US only
III-3-4	Name (LAST, First)	MOON, Junghee
III-3-5	Address:	860-108, Mia-5-dong, Kangbuk-gu 142-105 Seoul Republic of Korea
III-3-6	State of nationality	KR
III-3-7	State of residence	KR
IV-1	**Agent or common representative; or address for correspondence** The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:	agent
IV-1-1	Name (LAST, First)	LEE, Duckrog
IV-1-2	Address:	2nd Fl., Yeil Bldg., 700-19, Yorksam-dong, Kangnam-ku 135-080 Seoul Republic of Korea
IV-1-3	Telephone No.	82-2-555-1717
IV-1-4	Facsimile No.	82-2-555-1784
V	**Designation of States**	
V-1	Regional Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AP: GH GM KE LS MW MZ SD SL SZ TZ UG ZW and any other State which is a Contracting State of the Harare Protocol and of the PCT EA: AM AZ BY KG KZ MD RU TJ TM and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT EP: AT BE CH&LI CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE and any other State which is a Contracting State of the European Patent Convention and of the PCT OA: BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG and any other State which is a member State of OAPI and a Contracting State of the PCT

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V-2	National Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH&LI CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
V-5	**Precautionary Designation Statement** In addition to the designations made under items V-1, V-2 and V-3, the applicant also makes under Rule 4.9(b) all designations which would be permitted under the PCT except any designation(s) of the State(s) indicated under item V-6 below. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit.	
V-6	**Exclusion(s) from precautionary designations**	NONE
VI-1	**Priority claim of earlier national application**	
VI-1-1	Filing date	16 July 1999 (16.07.1999)
VI-1-2	Number	1999-28824
VI-1-3	Country	KR
VI-2	**Priority claim of earlier national application**	
VI-2-1	Filing date	02 September 1999 (02.09.1999)
VI-2-2	Number	1999-37022
VI-2-3	Country	KR
VI-3	**Priority claim of earlier national application**	
VI-3-1	Filing date	14 September 1999 (14.09.1999)
VI-3-2	Number	1999-39206
VI-3-3	Country	KR
VII-1	**International Searching Authority Chosen**	Korean Industrial Property Office (KIPO) (ISA/KR)

VIII	Check list	number of sheets	electronic file(s) attached
VIII-1	Request	4	-
VIII-2	Description	15	-
VIII-3	Claims	5	-
VIII-4	Abstract	1	hongilkim.txt
VIII-5	Drawings	8	-
VIII-7	TOTAL	33	

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	Accompanying items	paper document(s) attached	electronic file(s) attached
VIII-8	Fee calculation sheet	✓	-
VIII-9	Separate signed power of attorney	✓	-
VIII-16	PCT-EASY diskette	-	diskette
VIII-18	**Figure of the drawings which should accompany the abstract**	1	
VIII-19	**Language of filing of the international application**	Korean	
IX-1	**Signature of applicant or agent**		
IX-1-1	Name (LAST, First)	LEE, Duckroo	

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10-1	**Date of actual receipt of the purported international application**	
10-2	**Drawings:**	
10-2-1	Received	
10-2-2	Not received	
10-3	**Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application**	
10-4	**Date of timely receipt of the required corrections under PCT Article 11(2)**	
10-5	**International Searching Authority**	ISA/KR
10-6	**Transmittal of search copy delayed until search fee is paid**	

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11-1	**Date of receipt of the record copy by the International Bureau**	

RECORD COPY

YL000714PCT

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Original (for **SUBMISSION**) - printed on 14.07.2000 06:26:08 PM

0 0-1	**For receiving Office use only** International Application No.	PCT/KR 00/00773
0-2	International Filing Date	1st July 2000 (01.07.00)
0-3	Name of receiving Office and "PCT International Application"	Korean Industrial Property Office PCT International Application
0-4 0-4-1	**Form - PCT/RO/101 PCT Request** Prepared using	PCT-EASY Version 2.91 (updated 01.07.2000)
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VI-2-1	Filing date	02 September 1999 (02.09.1999)	
VI-2-2	Number	1999-37022	
VI-2-3	Country	KR	
VI-3	**Priority claim of earlier national application**		
VI-3-1	Filing date	14 September 1999 (14.09.1999)	
VI-3-2	Number	1999-39206	
VI-3-3	Country	KR	
VII-1	**International Searching Authority Chosen**	Korean Industrial Property Office (KIPO) (ISA/KR)	
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VIII-9	Separate signed power of attorney	✓	-
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10-2-2	Not received	
10-3	**Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application**	
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10-5	**International Searching Authority**	ISA/KR
10-6	**Transmittal of search copy delayed until search fee is paid**	

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11-1	**Date of receipt of the record copy by the International Bureau**	25 JULY 2000 (25. 07. 00)

Fig. 1a

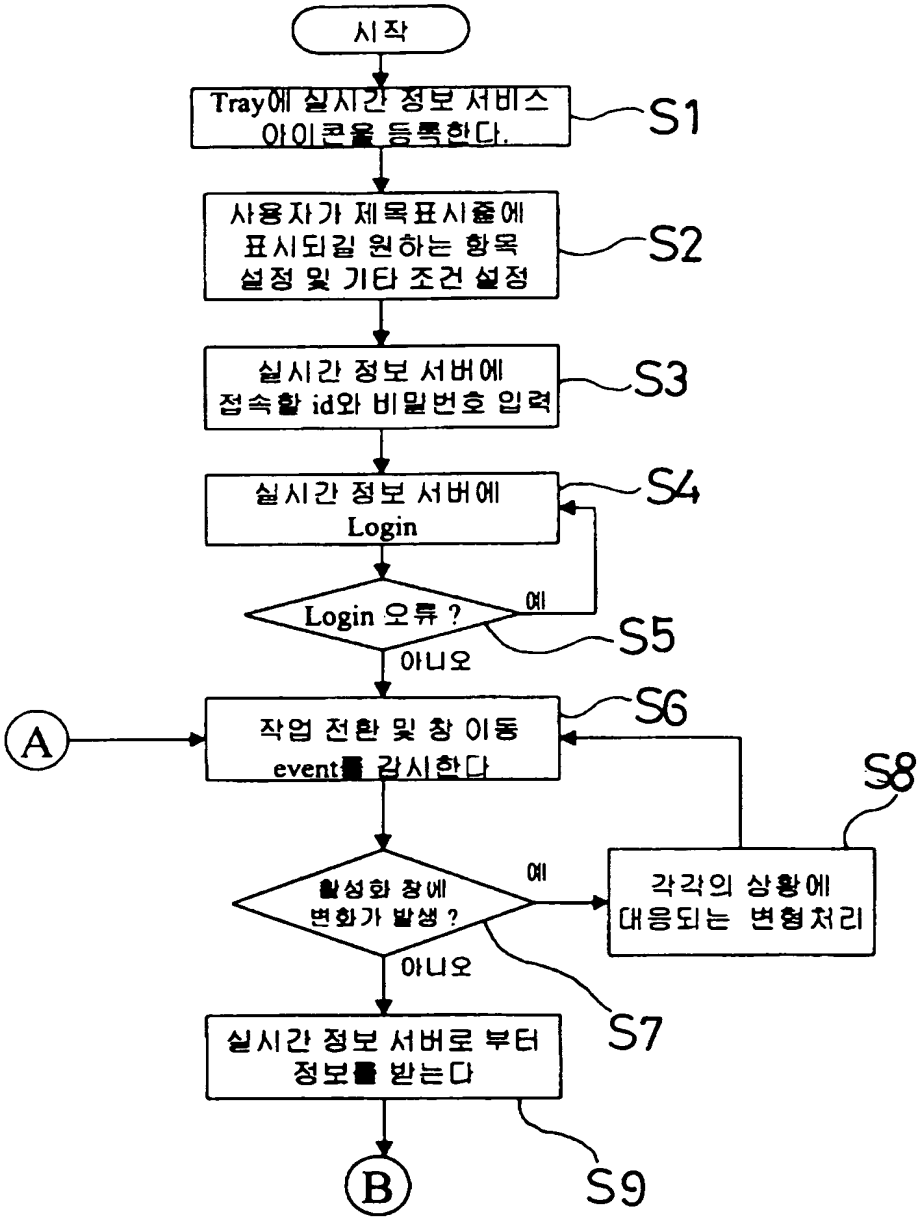

시작
Tray에 실시간 정보 서비스 아이콘을 등록한다.
S1
사용자가 제목표시줄에 표시되길 원하는 항목 설정 및 기타 조건 설정
S2
실시간 정보 서버에 접속할 id와 비밀번호 입력
S3
실시간 정보 서버에 Login
S4
Login 오류 ?
예
S5
아니오
A
작업 전환 및 창 이동 event를 감시한다
S6
S8
활성화 창에 변화가 발생 ?
예
각각의 상황에 대응되는 변형처리
아니오
S7
실시간 정보 서버로 부터 정보를 받는다
B
S9

Fig. 1b

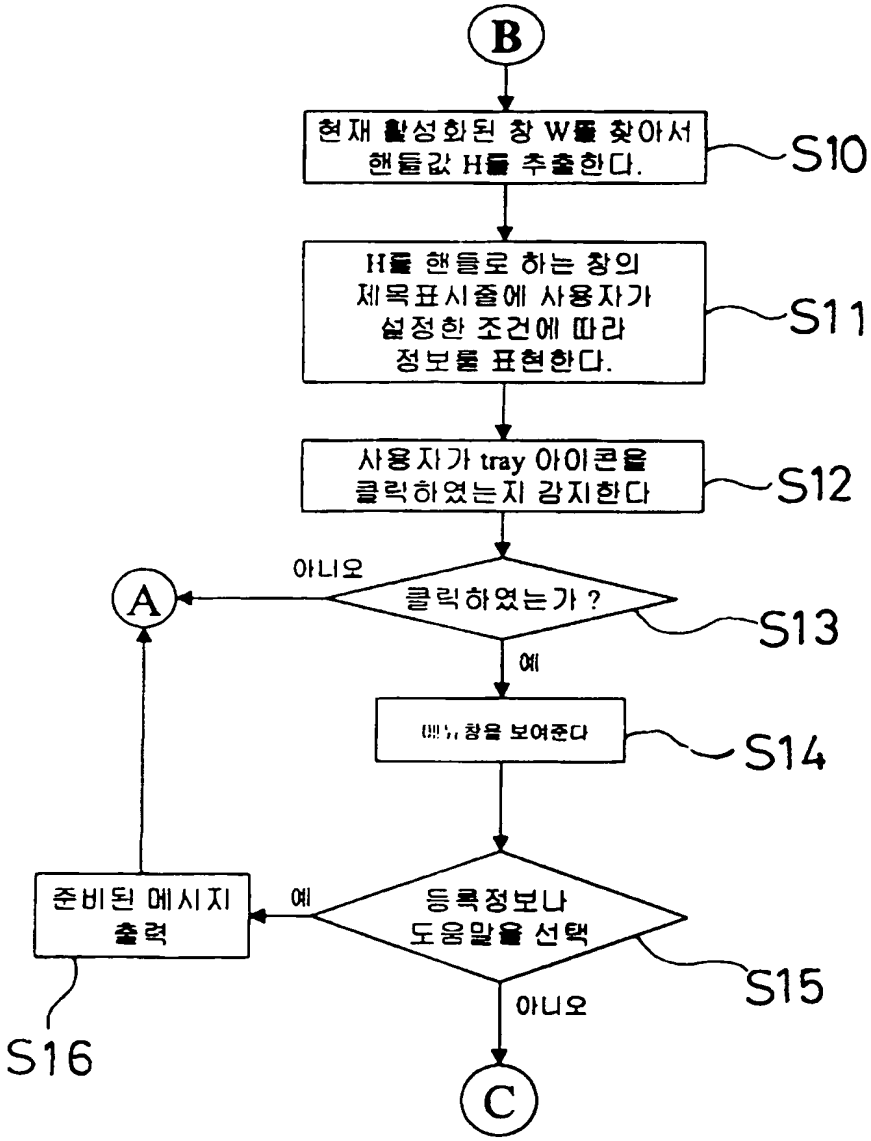

B
현재 활성화된 창 W를 찾아서 핸들값 H를 추출한다.
S10
H를 핸들로 하는 창의 제목표시줄에 사용자가 설정한 조건에 따라 정보를 표현한다.
S11
사용자가 tray 아이콘을 클릭하였는지 감지한다
S12
아니오
A
클릭하였는가 ?
S13
예
메뉴창을 보여준다
S14
준비된 메시지 출력
예
등록정보나 도움말을 선택
S15
아니오
S16
C

Fig. 1c

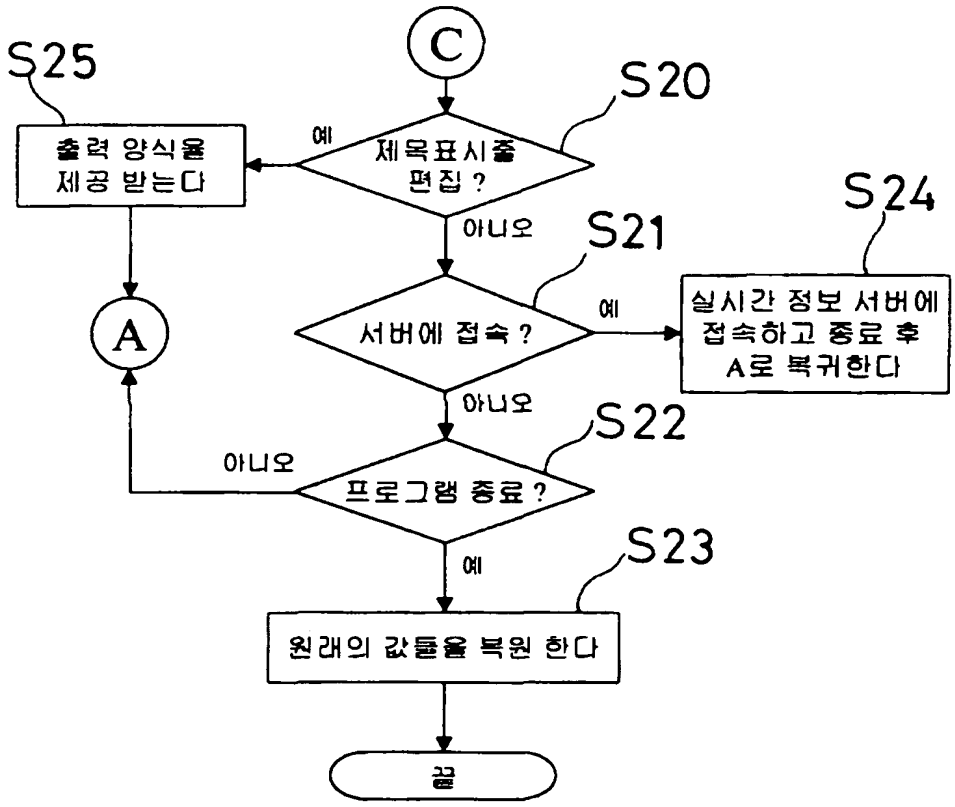

C
S20
제목표시줄 편집 ?
예
S25
출력 양식을 제공 받는다
아니오
S21
서버에 접속 ?
예
S24
실시간 정보 서버에 접속하고 종료 후 A로 복귀한다
A
아니오
S22
프로그램 종료 ?
아니오
예
S23
원래의 값들을 복원 한다
끝

Fig. 2a

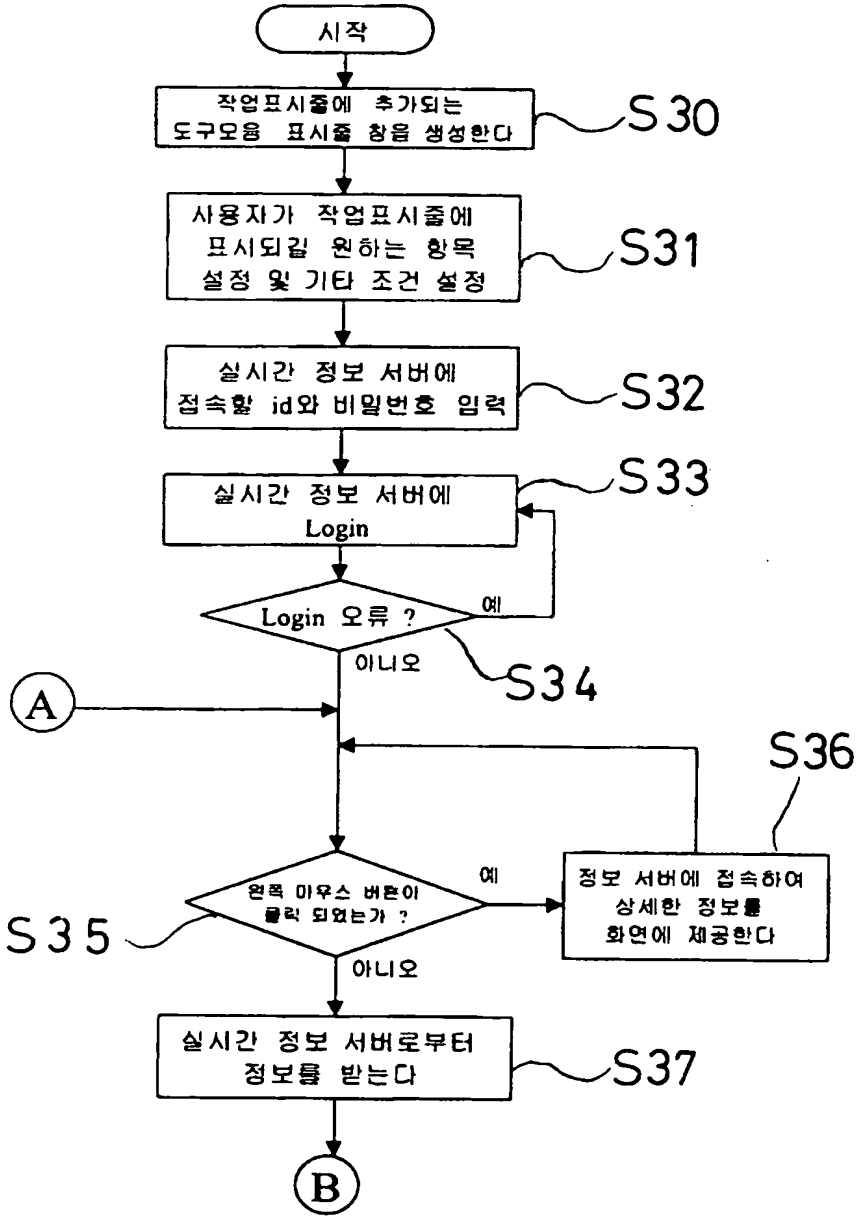

시작
작업표시줄에 추가되는 도구모음 표시줄 창을 생성한다
S30
사용자가 작업표시줄에 표시되길 원하는 항목 설정 및 기타 조건 설정
S31
실시간 정보 서버에 접속할 id와 비밀번호 입력
S32
실시간 정보 서버에 Login
S33
Login 오류 ?
예
아니오
S34
A
S36
왼쪽 마우스 버튼이 클릭 되었는가 ?
예
S35
정보 서버에 접속하여 상세한 정보를 화면에 제공한다
아니오
실시간 정보 서버로부터 정보를 받는다
S37
B

Fig. 2b

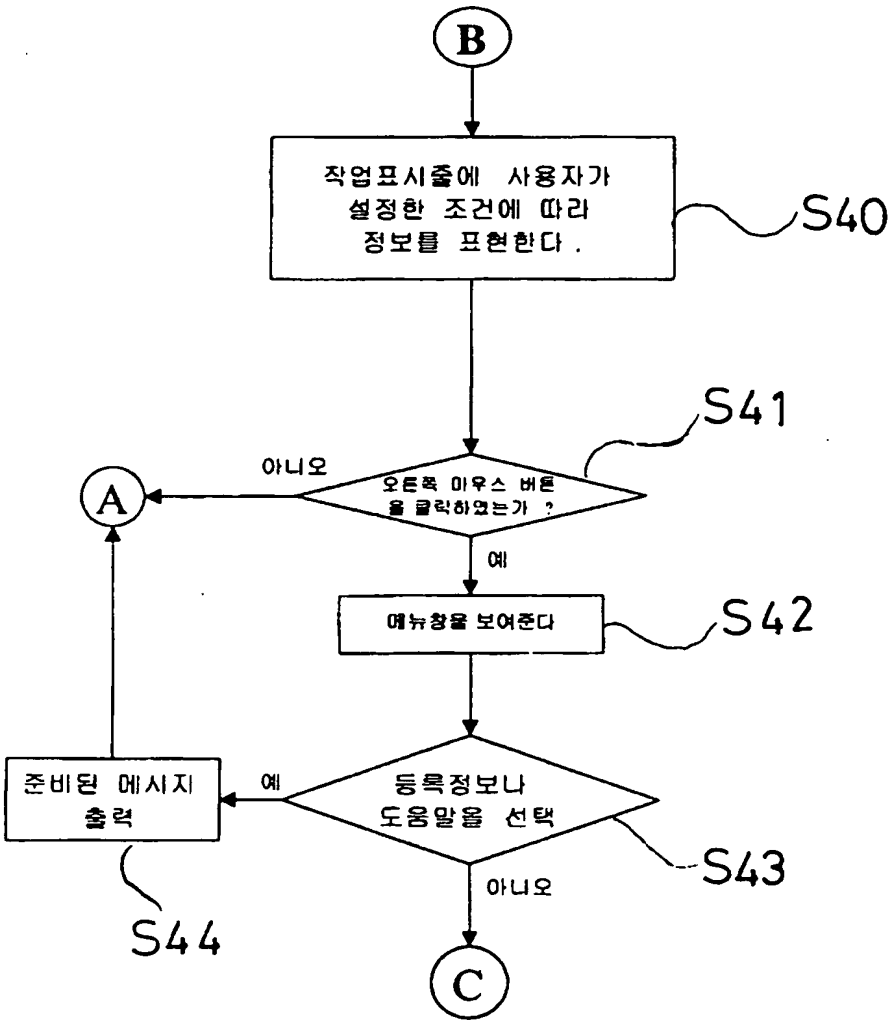

B
작업표시줄에 사용자가 설정한 조건에 따라 정보를 표현한다.
S40
S41
아니오
오른쪽 마우스 버튼을 클릭하였는가 ?
A
예
메뉴창을 보여준다
S42
준비된 메시지 출력
예
등록정보나 도움말을 선택
S43
아니오
S44
C

Fig. 2c

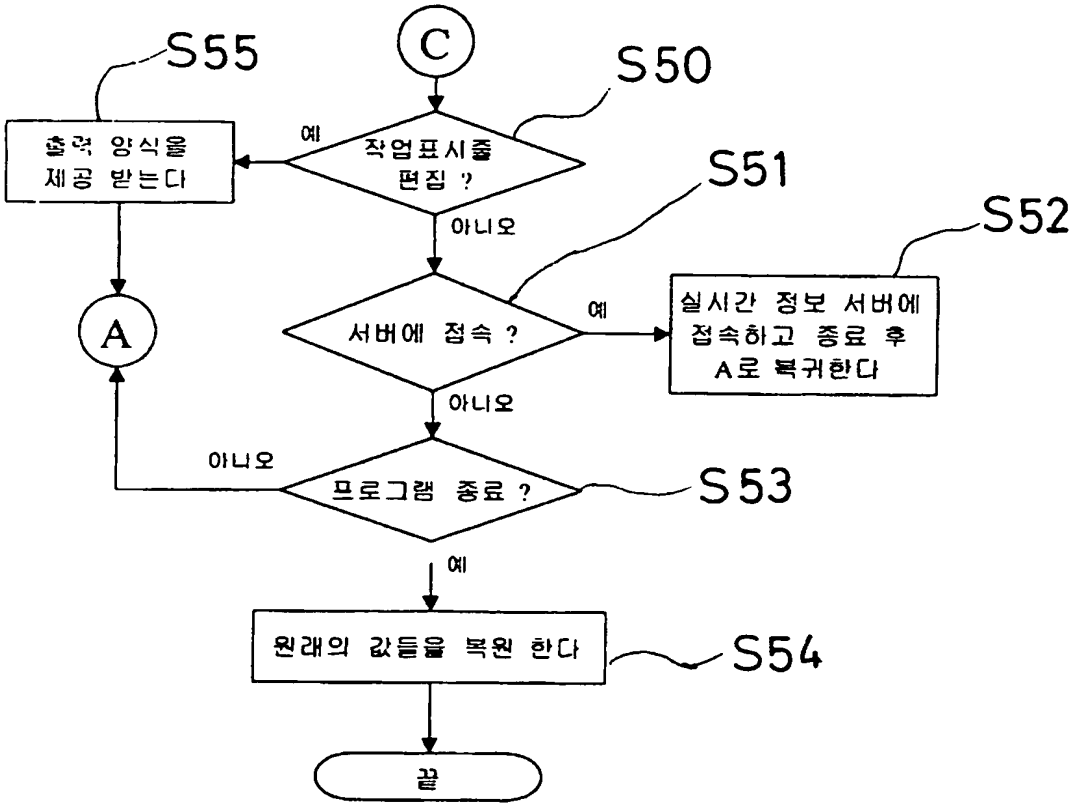

C
S50
작업표시줄 편집 ?
예
S55
출력 양식을 제공 받는다
아니오
S51
서버에 접속 ?
예
S52
실시간 정보 서버에 접속하고 종료 후 A로 복귀한다
아니오
A
아니오
프로그램 종료 ?
S53
예
원래의 값들을 복원 한다
S54
끝

Fig. 3a

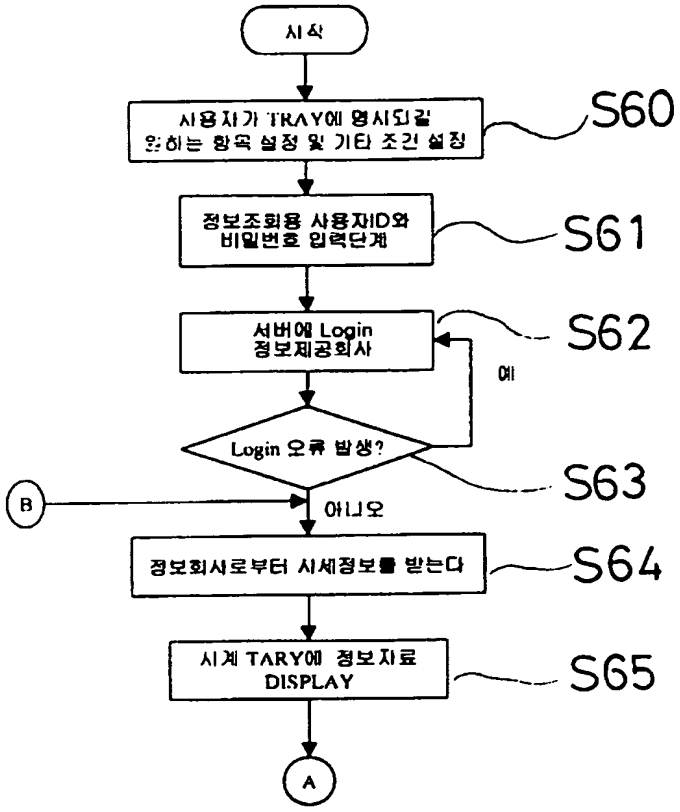
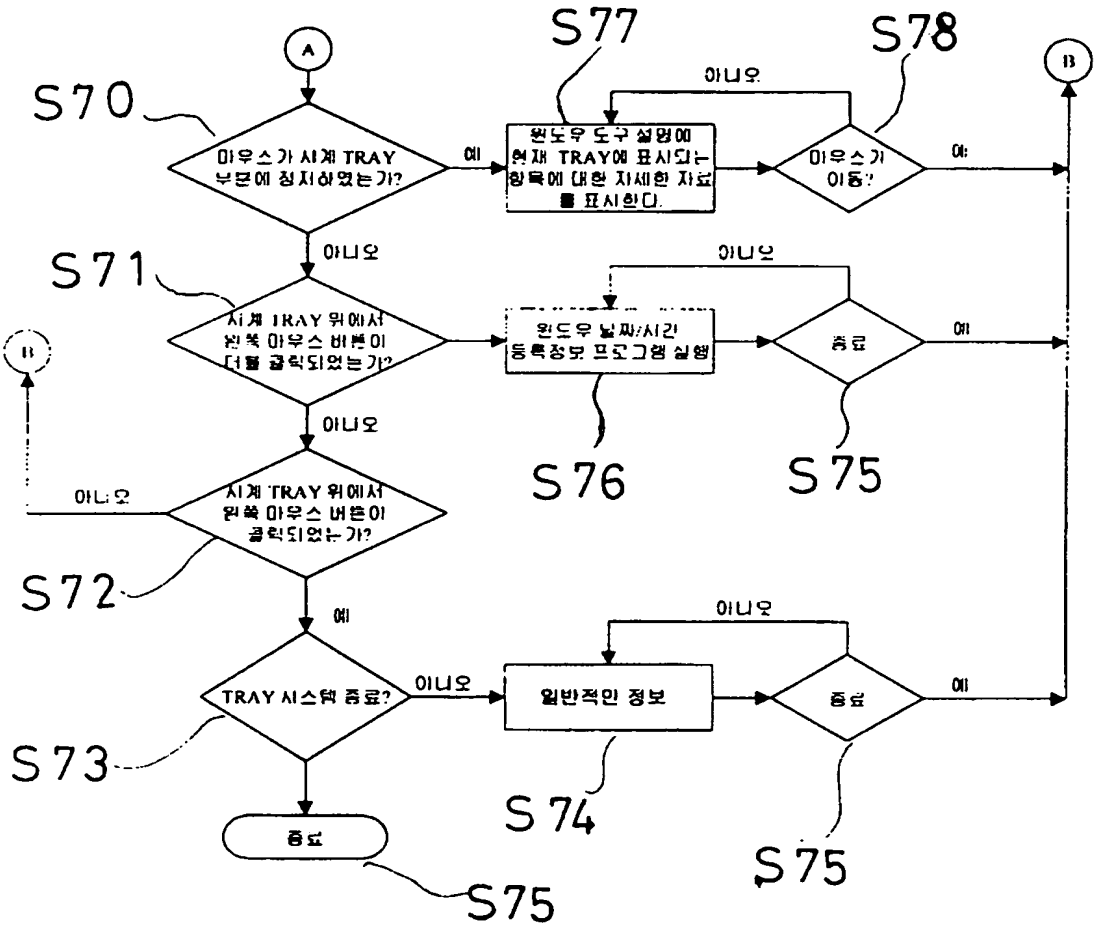

시작
사용자가 TRAY에 명시되길 원하는 항목 설정 및 기타 조건 설정
S60
정보조회용 사용자ID와 비밀번호 입력단계
S61
서버에 Login 정보제공회사
S62
예
Login 오류 발생?
S63
B
아니오
정보회사로부터 시세정보를 받는다
S64
시계 TARY에 정보자료 DISPLAY
S65
A

Fig. 3b


A
B
S70
마우스가 시계 TRAY 부분에 정지하였는가?
예
S77
윈도우 도구 설명에 현재 TRAY에 표시되는 항목에 대한 자세한 자료를 표시한다.
아니오
S78
마우스가 이동?
예
아니오
S71
시계 TRAY 위에서 왼쪽 마우스 버튼이 더블 클릭되었는가?
윈도우 날짜/시간 등록정보 프로그램 실행
종료
예
아니오
S76
S75
아니오
시계 TRAY 위에서 왼쪽 마우스 버튼이 클릭되었는가?
S72
예
TRAY 시스템 종료?
아니오
일반적인 정보
종료
예
S73
S74
S75
종료
S75

【명세서】

【발명의 명칭】

윈도우즈의 제목표시줄, 작업표시줄 및 트레이 시계상의 실시간 정보 서비스 시스템{Real-time information service system using title bar, task bar and tray clock of windows}

【기술분야】

본 발명은 실시간 정보 서비스 표시 방법에 관한 것으로, 특히 개인용 컴퓨터의 운영체제인 윈도우즈의 활성화된 창의 제목표시줄, 작업표시줄, 트레이 시계상에 정보 서버로부터 받은 정보를 실시간으로 디스플레이 해줌으로써 개인 사무실이나 집에서 컴퓨터상 다른 업무를 진행하면서도 별도의 작업 없이 새로운 정보를 수시로 확인할 수 있도록 윈도우즈를 활용한 실시간 정보 서비스 시스템에 관한 것이다.

【배경기술】

종래의 정보 획득은 신문과 같은 문서 언론 매체나 방송과 같은 매체를 통하여 얻을 수 있고 현재 휴대폰이나 전화 정보 서비스와 같은 부가서비스에서 정보를 제공하여 주는 정보 서비스 매체를 통하여 정보를 획득하고 있었다.

또한, 각 사이버 방송사나 각종 인터넷 정보 서비스에서 제공하는 통신을 이용한 정보 조회가 있었다.

그러나, 문서나 방송을 통한 속보는 정보로 제공되어 취급되는 내용의 양이 적고 실시간이 아니라는 문제점이 있으며, 휴대폰에서 제공되는 정보는 부가서비스를 신청하거나 전달 내용이 휴대폰의 작은 액정 화면을 통하여 제공되기 때문에 사용자가 조회하여 검색하는데 불편

하다는 문제점을 가지고 있었다.

또한, 현재 각 정보 서비스 회사에서 제공하고 있는 실시간 정보 서비스 시스템은 해당 서비스를 제공하는 호스트에 접속을 하거나 웹 브라우저와 같은 프로그램을 이용하여 검색을 하기 때문에 현재 진행되는 작업을 일시적으로 중단하거나 병행으로 처리해야하는 문제점이 있었다.

【발명의 상세한 설명】

따라서, 본 발명은 상기 문제점을 해결하기 위하여 안출된 것으로서, 본 발명의 목적은 개인용 컴퓨터의 윈도우즈 화면에서 제목표시줄, 작업표시줄, 트레이 시계상에 표시될 실시간 정보를 정보 서버로부터 수신 받아 임시 기억장치에 저장하고 새로운 정보가 제공될 때마다 이를 제목표시줄, 작업표시줄, 트레이 시계상에 디스플레이하여 사용자가 언제든지 간편하게 정보를 획득할 수 있도록 하는 실시간 정보 표시 방법을 제공하는데 그 목적이 있다.

상기 목적을 달성하기 위한 본 발명은, 각각의 제목표시줄, 작업표시줄, 트레이 시계상에서 제목표시줄은 현재 활성화된 윈도우즈 창의 핸들값을 추출하여 이에 해당하는 창의 제목표시줄 값을 실시간으로 제공되는 정보로 대치하고 사용자가 작업 전환을 실행하여 다른 창으로 활성화 제어권이 넘어가는 경우 현재 창의 제목표시줄 값을 복원하고 절차를 반복함으로써 사용자의 편의성을 도모하기 위하여 등록정보와 표시되는 실시간 정보의 유형을 제어하는 부분을 윈도우즈 시스템의 트레이 아이콘 형태로 제공하여 원하는 정보를 조절하도록 구성하는 것과, 작업 표시줄은 실시간 정보를 표현하기 위한 윈도우창을 추가하고 해당 창에 실시간 정보 서비스로부터 제공받은 값을 디스플레이하여 사용자

의 편의성을 도모하기 위하여 등록정보와 표시되는 실시간 정보의 유형을 제어하기 위하여 사용자가 오른쪽 마우스를 클릭하면 작업표시줄에 표현된 정보를 조절하도록 구성하는 것과, 트레이 시계는 일정시간 정지하는 것으로 판단시 윈도우 도구 설명 형태로 해당 정보에 대한 상세한 정보를 제공하고 마우스가 트레이 시계 부분에서 한번 클릭된 것으로 판단시 일반 주식 조회 및 거래 화면을 디스플레이하고 마우스가 트레이 시계 부분에서 두 번 클릭된 것으로 판단시 일반 증권 및 거래 화면을 삭제하고 날짜 및 시간에 등록정보에 대한 화면을 디스플레이하도록 프로그래밍하는 방법을 달성하였다.

【도면의 간단한 설명】

도 1a, 도 1b, 도 1c 는 본 발명의 바람직한 실시예의 윈도우즈의 제목표시줄, 작업표시줄 및 트레이 시계상의 실시간 정보 서비스 시스템의 제목표시줄의 순서도,

도 2a, 도 2b, 도 2c 는 본 발명의 바람직한 실시예의 윈도우즈의 제목표시줄, 작업표시줄 및 트레이 시계상의 실시간 정보 서비스 시스템의 작업표시줄의 순서도,

도 3a, 도 2b 는 본 발명의 바람직한 실시예의 윈도우즈의 제목표시줄, 작업표시줄 및 트레이 시계상의 실시간 정보 서비스 시스템의 트레이 시계상의 순서도이다.

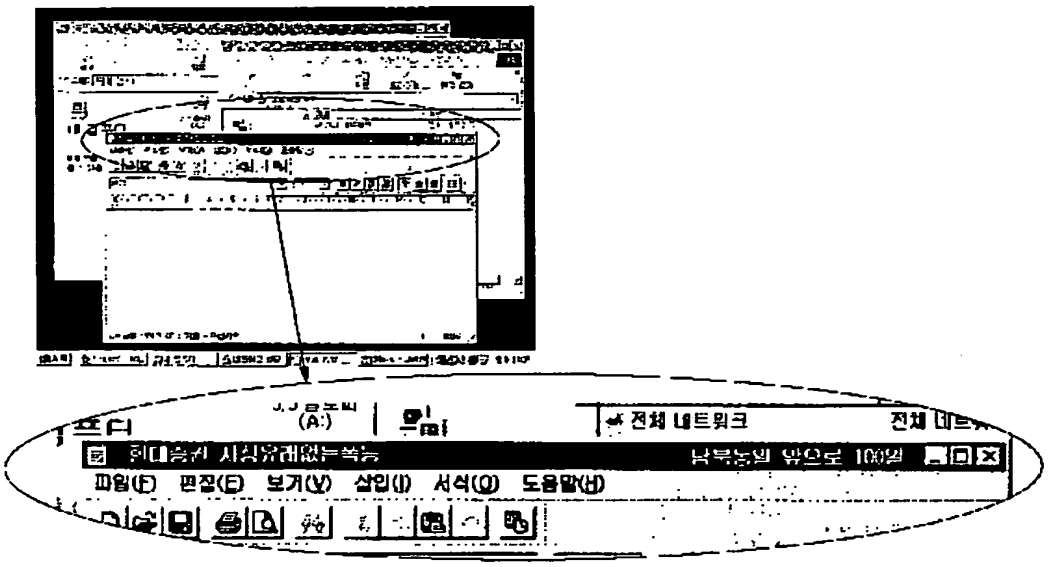
【실시예】

이하, 본 발명의 구성을 바람직한 실시예를 들어 첨부된 도면을 참고로 상세히 설명한다.

도 1 은 본 발명의 바람직한 실시예의 제목표시줄을 활용한 실

시간 정보 서비스 시스템은 다음과 같은 단계로 이루어져 있으며 실시예를 들면 다음과 같다.

실시예)



상기 실시예처럼 제목표시줄에 실시간으로 정보가 전송되어 디스플레이 되는 것이며 이러한 것을 구현하기 위하여 다음과 같은 단계로 이루어져 있다.

트레이에 실시간 정보 서비스 아이콘을 등록하는 단계(S1);

사용자가 제목표시줄에 표시되길 원하는 항목 설정 및 기타 조건 설정 단계(S2);

실시간 정보 서버에 접속할 ID와 비밀번호 입력 단계(S3);

실시간 정보 서버에 로그인 하는 단계(S4, S5));

작업 전환 및 창 이동 이벤트를 감시하는 단계(S6);

활성화 창에 변화가 발생하는 단계(S7);

각각의 상황에 대응되는 변형처리 단계(S8);

실시간 정보 서버로부터 정보를 받는 단계(S9);

현재 활성화된 윈도우창을 찾아서 핸들값을 추출하는 단계(S10);

H를 핸들로 하는 창의 제목표시줄에 사용자가 설정한 조건에 따라 정보를 표현하는 단계(S11);

사용자가 트레이 아이콘을 클릭하였는지 감지하는 단계(S12, S13));

메뉴창을 보여주는 단계(S14);

등록정보나 도움말을 선택하는 단계(S15);

준비된 메시지 출력하는 단계(S16);

제목표시줄 편집하는 단계(S20);

출력 양식을 제공 받는 단계(S25);

서버에 접속하는 단계(S21);

실시간 정보 서버에 접속하여 종료 후 작업 전환 및 창 이동 이벤트를 감시하는 단계로 복귀하는 단계(S24);

프로그램 종료 및 원래 값들을 복원하는 단계(S22, S23)로 이루어져 있으며 이러한 단계는 윈도우즈 활성화 창에 각종 정보나 자료를 실시간으로 정보제공업체로부터 자료를 제목표시줄에 디스플레이하기 위한 것이다.

상기 트레이에 실시간 정보 서비스 아이콘을 등록하는 단계(S1)는 사용자의 편이성을 도모하기 위하여 등록정보와 표시되는 실시간 정보의 유형을 제어하는 부분을 윈도우즈 시스템의 트레이 아이콘 형태로 제공하여 원하는 정보를 조절하는 것이다.

상기 사용자가 제목표시줄에 표시되길 원하는 항목 설정 및 기타 조건 설정 단계(S2)는 부가 서비스 관리부에서 사용자가 설정한 조건에 맞는 경우에 소리나 화면 반전과 같은 경보 기능들을 관리하는 것이다.

상기 실시간 정보 서버에 접속할 ID 와 비밀번호 입력 단계(S3)는 제목표시줄에 뉴스나 광고 기타 유용한 광고를 제공받을 수 있도록 ID 와 비밀번호를 입력하는 것이다.

상기 실시간 정보 서버에 로그인하는 단계(S4, S5)는 상기의 실시간 정보 서버에서 접속할 ID 와 비밀번호를 입력하여 로그인하는 것으로 각종 정보를 제공받기 위한 접속 단계인 것이다.

상기 작업 전환 및 창 이동 이벤트를 감시하는 단계(S6)는 실시예를 들어 윈도우 탐색기 창에서 직업을 하다가 제어판으로 이동하는 이벤트가 발생하면 이것을 감시하는 것이다.

상기 활성화 창에 변화가 발생하는 단계(S7)는 상기 작업 전환 및 창 이동 이벤트를 감시하는 단계에서 예를 들은 탐색기 창과 제어판에서 실시간 정보를 제공받는 창의 변화를 나타내고 활성화 창에 변화가 발생하면 각각의 상황에 대응되는 변형처리 하는 것이다.

각각의 상황에 대응되는 변형처리 단계(S8)는 현재 활성화된 창의 크기가 변경되거나, 현재 활성화된 창이 바뀌거나, 사용자가 마우스를 이용하여 작업표시줄의 위치를 변경하거나, 트레이에 아이콘이 새로 등록되어 위치하는 경우에 해당 작업표시줄의 크기가 변경되며, 이때 변경된 작업표시줄의 크기에 맞추어 정보 표현 범위를 설정하는 것이다.

상기 실시간 정보 서버로부터 정보를 받는 단계(S9)는 정보를 제공하는 업체로부터 증권 정보, 광고, 뉴스속보, 문자방송 등의 정보를 제공받는 것이다.

상기 현재 활성화된 윈도우창을 찾아서 핸들값을 추출하는 단계(S10)는 작업 관리부의 작업 관리에 따라 현재 활성화된 윈도우즈 창의 처리값을 추출하는 것이다.

상기 H 를 핸들로 하는 창의 제목표시줄에 사용자가 설정한 조

건에 따라 정보를 표현하는 단계(S11)는 해당 정보 표현 상태에서 사용자가 메뉴 항목에서 마우스를 이용하여 선택하는 항목이 무엇인지를 찾아내어 선택된 항목에 따라 행당 명령을 설정한 조건에 따라 디스플레이하는 것이다.

상기 사용자가 tray 아이콘을 클릭하였는지 감지하는 단계(S12, S13)는 실시간 정보의 유형을 제어하는 트레이 아이콘이 원하는 정보를 조절하는 것으로 이것을 클릭하였는지를 알아보는 것으로 클릭하지 않을 경우 상기 작업 전화 및 창 이동 이벤트를 감시하는 단계로 넘어가는 것이다.

상기 메뉴창을 보여주는 단계(S14)는 등록정보, 도움말, 제목표시줄 편집, 실시간 정보 서비스 접속, 종료 등의 메뉴창을 보여주는 것이다.

상기 등록정보나 도움말을 선택하는 단계(S15)는 등록정보나 도움말을 선택하면 준비된 메시지를 출력하고 그렇지 않을 경우 제목표시줄을 편집하는 단계로 넘어가는 것이다.

상기 준비된 메시지 출력하는 단계(S16)는 정보를 제공받는 곳으로부터 미리 설정된 정보의 내용을 보여주는 것이다.

상기 제목표시줄 편집하는 단계(S20)는 작업 표시줄의 각종 정보에 대한 출력 약식을 편집하여 제공받는 것이다.

상기 출력 양식을 제공받는 단계(S25)는 제목표시줄에 표현되는 정보의 출력방법을 설정하는 단계로써, 주식의 전광 게시판과 같은 흐름글(ticker 창 표현) 형태나, 글자의 점멸과 같은 표현 방식을 제공받는 것이다.

상기 서버에 접속하는 단계(S21)는 상기 제목표시줄 편지 단계에서 출력 양식을 제공받지 못 할 경우로써 서버에 접속하지 않으면 프로

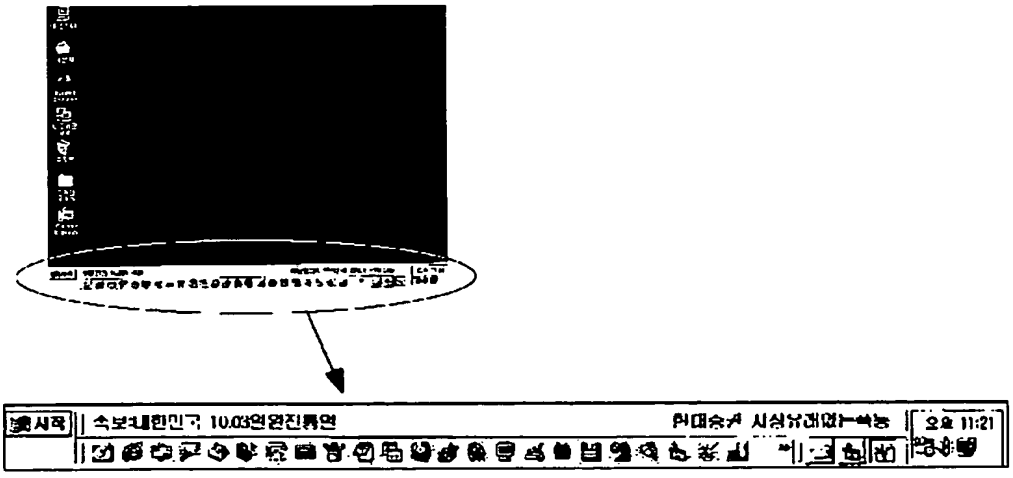
그램을 종료하고 접속하면 실시간 정보 서버에 접속하여 종료 후 작업 전환 및 창 이동 이벤트를 감시하는 단계로 진행하는 것이다.

상기 실시간 정보 서버에 접속하고 종료 후 작업 전환 및 창 이동 이벤트를 감시하는 단계로 복귀하는 단계(S24)는 현재 활성화된 창의 핸들값을 획득하여 기존에 정보가 표현되고 있는 창의 핸들값과 비교하여 변화가 있는지를 판별하는 단계이며, 변화가 발생하면 핸들값을 바꾸어서 항상 정보가 현재 활성화된 창의 제목 표시줄에 표현되도록 하는 것이다.

상기 프로그램 종료 및 원래의 값들을 복원하는 단계(S22, S23)는 일련의 모든 과정을 걸쳐 작업이 완료되면 프로그램을 종료함으로써 원래의 값들을 복원하는 것이다.

도 2는 본 발명의 바람직한 실시예의 작업표시줄을 활용한 실시간 정보 서비스 시스템은 다음과 같은 단계로 이루어져 있고 실시예를 들으면 다음과 같다.

실시예)



상기 실시예처럼 작업표시줄에 실시간으로 정보가 전송되어 디

스플레이 되는 것이며 이러한 것을 구현하기 위하여 다음과 같은 단계로 이루어져 있다.

작업표시줄에 추가되는 도구모음 표시줄 창을 생성하는 단계(S30);

사용자가 작업표시줄에 표시되길 원하는 항목설정 및 기타 조건 설정하는 단계(S31);

실시간 정보 서버에 접속할 ID 와 비밀번호 입력하는 단계(S32);

실시간 정보 서버에 로그인하는 단계(S33, S34);

왼쪽 마우스 버튼이 클릭 되었는가 확인하는 단계(S35);

정보 서버에 접속하여 상세한 정보를 화면에 제공하는 단계;(S36)

실시간 정보 서버로부터 정보를 받는 단계(S37);

작업표시줄에 사용자가 설정한 조건에 따라 정보를 표현하는 단계(S40);

오른쪽 마우스 버튼을 클릭하는 단계(S41);

메뉴창을 보여주는 단계(S42);

등록정보나 도움말을 선택하는 단계(S43);

준비된 메시지 출력하는 단계(S44);

작업표시줄 편집하는 단계(S50);

출력 양식을 제공받는 단계(S55)

서버에 접속하는 단계(S51);

실시간 정보 서버에 접속하고 종료 후 오른쪽 마우스 버튼을 클릭하는 단계로 복귀하는 단계(S52);

프로그램 종료 및 원래의 값들을 복원하는 단계(S53, S54)로 이루어져 있으며 이러한 단계는 각종 정보나 자료를 실시간으로 정보제공

업체로부터 자료를 작업표시줄에 디스플레이하기 위한 것이다.

상기 작업표시줄에 추가되는 도구모음 표시줄 창을 생성하는 단계(S30)는 모니터링되는 화면의 하기 부분에 도구모음 표시줄이 있으며 이 도구모음 표시줄의 위에 작업표시줄을 생성하는 것이다.

상기 사용자가 작업표시줄에 표시되길 원하는 항목설정 및 기타 조건 설정하는 단계(S31)는 부가 서비스 관리부에서 사용자가 설정한 조건에 맞는 경우에 소리나 화면 반전과 같은 경보 기능들을 관리하는 것이다.

상기 실시간 정보 서버에 접속할 ID와 비밀번호 입력하는 단계(S32)는 작업표시줄에 뉴스나 광고 기타 유용한 광고를 제공받을 수 있도록 ID와 비밀번호를 입력하는 것이다.

상기 실시간 정보 서버에 로그인하는 단계(S33, S34)는 상기의 실시간 정보 서버에서 접속할 ID와 비밀번호를 입력하여 로그인하는 것으로 각종 정보를 제공받기 위한 접속 단계인 것이다.

상기 왼쪽 마우스 버튼이 클릭 되었는가 확인하는 단계(S35)는 등록정보 및 도움말등 작업표시줄 편집, 실시간 정보 서비스 접속, 종료 등의 메뉴창을 보여주어 선택하는 항목이 무엇이지를 찾아내어 선택된 항목에 따라 해당명령을 수행하는 것이다.

상기 정보 서버에 접속하여 상세한 정보를 화면에 제공하는 단계(S36)는 정보를 제공하는 서버에 접속하게 되면 필요로 하는 상세한 정보를 화면에 디스플레이하는 것이다.

상기 실시간 정보 서버로부터 정보를 받는 단계(S37)는 정보를 제공하는 업체로부터 증권 정보, 광고, 뉴스속보, 문자방송 등의 정보를 제공받는 것이다.

상기 작업표시줄에 사용자가 설정한 조건에 따라 정보를 표현하

는 단계(S40)는 상기 실시간 정보 서버로부터 받을 정보가 모뎀과 같이 항상 인터넷에 접속한 상태가 아닌 사용자들을 위하여 해당 컴퓨터가 인터넷에 접속되었는지를 판별하여 접속한 경우 뉴스, 주식 시세, 스포츠, 정치, 경제분야의 정보를 작업표시줄에 표시하는 것이다.

상기 오른쪽 마우스 버튼을 클릭하는 단계(S41)는 사용자의 편의성을 도모하기 위하여 해당 도구 모음 창에 위치한 상태에서 오른쪽 마우스를 클릭 하거나 트레이에 등록된 아이콘을 클릭 한 경우 등록정보와 표시되는 실시간 정보를 조절하는 것이다.

상기 메뉴창을 보여주는 단계(S42)는 등록정보, 도움말, 작업표시줄 편집, 실시간 정보 서비스 접속, 종료 등의 메뉴창을 보여주는 것이다.

상기 등록정보나 도움말을 선택하는 단계(S43)는 등록정보나 도움말을 선택하면 준비된 메시지를 출력하고 그렇지 않을 경우 제목표시줄을 편집하는 단계로 넘어가는 것이다.

상기 준비된 메시지 출력 단계(S44)는 정보를 제공받는 곳으로부터 미리 설정된 정보의 내용을 보여주는 것이다.

상기 작업표시줄을 편집하는 단계(S50)는 작업 표시줄의 각종 정보에 대한 출력 약식을 제공받는 것이다.

상기 출력 양식을 제공받는 단계(S55)는 작업표시줄의 각종 정보의 출력 방법을 설정하는 단계로써, 주식의 전광 게시판과 같은 흐름글 형태나, 글자의 점멸과 같은 표현 방식을 제공받는 것이다.

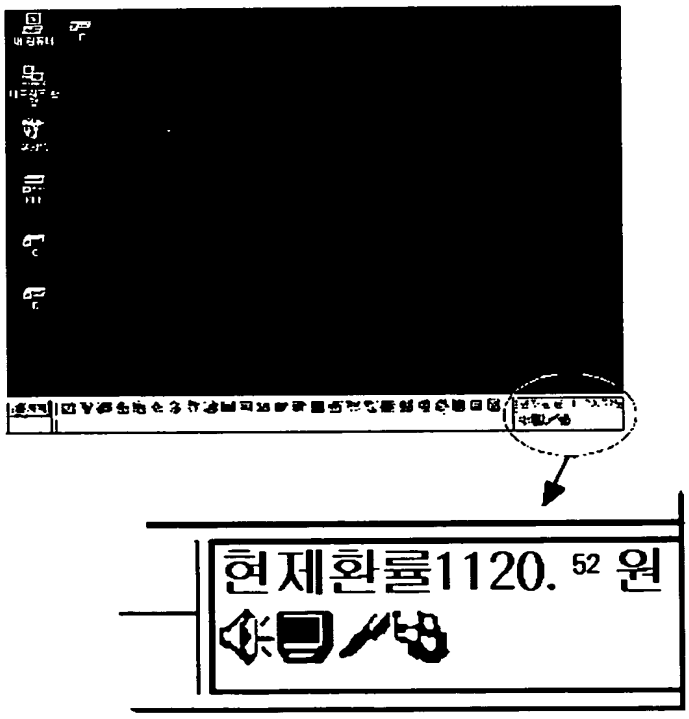
상기 서버에 접속하는 단계(S51)는 상기 제목표시줄 편지 단계에서 출력 양식을 제공받지 못 할 경우로써 서버에 접속하지 않으면 프로그램을 종료하고 접속하면 실시간 정보 서버에 접속하여 종료 후 작업 전환 및 창 이동 이벤트를 감시하는 단계로 진행하는 것이다.

상기 실시간 정보 서버에 접속하고 종료 후 마우스 감지 단계로 복귀하는 단계(S52)는 현재 접속된 서버에 종속되어 있는 정보 서버로 접속하여 실시간 정보를 획득할 수 있도록하고, 사용자의 마우스 클릭을 감지하는 것이다.

상기 프로그램 종료 및 원래의 값들을 복원하는 단계(S53, S54)는 일련의 모든 과정을 걸쳐 작업이 완료되면 프로그램을 종료함으로써 원래의 값들을 복원하는 것이다.

도 3은 본 발명의 바람직한 실시예의 작업표시줄을 활용한 실시간 정보 서비스 시스템은 다음과 같은 단계로 이루어져 있고 실시예를 들으면 다음과 같다.

실시예)



상기 실시예처럼 트레이 시계상에 실시간으로 정보가 전송되어 디스플레이 되는 것이며 이러한 것을 구현하기 위하여 다음과 같은 단

계로 이루어져 있다.

사용자가 트레이에 명시되길 원하는 항목 설정 및 기타 조건 설정하는 단계(S60);

정보 조회용 사용자 ID 와 비밀 번호를 입력하는 단계(S61);

정보제공회사 서버에 로그인하는 단계(S62, S63);

정보회사로부터 시세 정보를 받는 단계(S64);

시계 트레이에 정보 자료를 표시하는 단계(S65);

마우스가 시계 트레이 부분에 정지하였는가 확인 단계(S70);

윈도우 도구 설명에 현재 트레이에 표시되는 항목에 대한 자세한 자료를 표시하는 단계(S77);

시계 트레이 위에서 왼쪽 마우스 버튼이 더블 클릭되었는가 확인 단계(S71);

윈도우 날짜, 시간, 등록정보 프로그램 실행 단계(S76);

시계 트레이 위에서 왼쪽 마우스 버튼이 클릭 되었는가 확인 단계(S72);

트레이 시스템 종료 단계(S73);

일반적인 정보 조회와 윈도우 날짜, 시간, 등록정보 프로그램 실행 단계 및 종료 단계(S74, S75, S76)로 이루어져 있으며 이러한 단계는 각종 정보나 자료를 실시간으로 정보제공업체로부터 자료를 트레이 시계에 디스플레이하기 위한 것이다.

상기 사용자가 트레이에 명시되길 원하는 항목 설정 및 기타 조건 설정하는 단계(S60)는 작업표시줄의 최우측에 위치되는 트레이 시계에 각종 정보를 나타내주기 위해 정보를 제공하는 업체를 설정하고 이에 맞는 조건을 설정하는 것이다.

상기 정보 조회용 사용자 ID 와 비밀 번호를 입력하는 단계(S61)

는 정보를 제공받기 위해서 ID 와 비밀 번호를 입력하는 것이다.

상기 정보제공회사 서버에 로그인하는 단계(S62, S63)는 상기 ID 와 비밀번호를 입력하여 정보제공회사의 특정 정보를 검색할 수 있는 것이다.

상기 정보제공회사로부터 각종 정보를 받는 단계(S64)는 상기에서 필요로 하는 정보를 검색 후 내려받는 것이다.

상기 시계 트레이에 정보 내용를 표시하는 단계(S65)는 뉴스, 주식 시세 등의 정보를 문자화하여 표시하고 설정해 놓은 조건을 만족하는 경우 색상, 소리, 반전 등으로 알람을 해주는 부가적인 기능인 것이다.

상기 마우스가 시계 트레이 부분에 정지하였는가 확인 단계(S70)는 정지했을 경우 윈도우 도구 설명에 현재 트레이에 표시되는 항목에 대한 자세한 자료를 표시고 마우스가 이동하여 로그인 단계로 진행되는 것과 정지하지 않았을 경우 시계 트레이 위에서 왼쪽 마우스 버튼이 더블 클릭하였는가 확인하는 단계로 넘어가는 것이다.

상기 윈도우 도구 설명에 현재 트레이에 표시되는 항목에 대한 자세한 자료를 표시하는 단계(S77)는 윈도우즈 풍선 도움말(tool tip) 형태의 표현 방식으로 시계창에 표현된 정보 이외의 부가적인 상세 정보를 표현하는 것이다.

상기 시계 트레이 위에서 왼쪽 마우스 버튼이 더블 클릭되었는가 확인 단계(S71)는 왼쪽 마우스를 더블 클릭하여 트레이 시스템을 종료하고 더블 클릭하지 않았을 경우 로그인 단계로 진행하는 것이다.

상기 윈도우 날짜, 시간 등록정보 프로그램 실행 단계(S76)는 상기 왼쪽 마우스를 더블클릭하면 인터넷을 통한 정보가 윈도우 날짜, 시간, 등록정보 프로그램으로 변환하여 실행하는 것이다.

상기 시계 트레이 위에서 왼쪽 마우스 버튼이 클릭되었는가 확인 단계(S72)는 상기의 표현방식을 사용자가 임의로 바꾸거나 관련되는 등록정보를 변경하고자 할 때 사용되는 것이다.

상기 트레이 시스템 종료 단계(S73)는 만약 종료하기를 거부한다면 일반적인 정보 조회 및 거래 프로그램을 실행할 수 있는 단계인 것이다.

상기 일반적인 정보 조회 및 거래 프로그램 실행 및 종료 단계(S74, S75, S76)는 상기에서 설명한 것과 같이 필요로 하는 정보를 조회하고 거래할 수 있도록 프로그램을 설치하여 실행하고 모든 과정이 마치면 종료하는 것이다.

【산업상이용가능성】

이상에서 설명한 바와 같이, 본 발명은 윈도우즈의 활성화된 창의 제목표시줄, 작업표시줄, 트레이 시계상에 실시간으로 제공되는 정보를 표현함으로써 다른 프로그램과의 간섭없이 실시간 정보를 검색할 수 있다는 점에서 사용자에게 편리함을 주는 효과가 있으므로 컴퓨터 응용 프로그래밍 기술 분야에서 매우 유용한 발명이다.

또한, 단순히 해당 프로그램의 제목과 같은 내용보다는 사용자에게 유용한 정보를 서비스함으로써 컴퓨터와 인터넷을 생활화하는 현대인에게 유용한 정보를 제공하고 본 발명의 응용으로 많은 투자가들이 실시간으로 정확한 정보를 얻고자 하는 주식의 시세나, 스포츠, 정치, 경제 분야에 대한 뉴스 속보나, 간략한 문구로 구성된 광고물 또는 실시간 정보 서버를 구비하고 있는 기업이나 공공기관과 같은 단체의 문자 방송에 이르기까지 다양한 분야에서 응용될 수 있는 매우 유용한 발명이다.

【청구의 범위】

【청구항 1】

컴퓨터 운영체제에서 컴퓨터의 제목표시줄, 작업표시줄, 트레이 시계에 정보서버로부터 수신된 정보를 디스플레이 하는 것을 특징으로 하는 윈도우즈의 제목표시줄, 작업표시줄 및 트레이 시계상의 실시간 정보.서비스 시스템.

【청구항 2】

제 1 항에 있어서, 상기 제목표시줄은 정보를 디스플레이 하기 위하여,

트레이에 실시간 정보 서비스 아이콘을 등록하는 단계;

사용자가 제목표시줄에 표시되길 원하는 항목 설정 및 기타 조건 설정 단계;

실시간 정보 서버에 접속할 ID 와 비밀번호 입력 단계;

실시간 정보 서버에 로그인 하는 단계;

작업 전환 및 창 이동 이벤트를 감시하는 단계;

활성화 창에 변화가 발생하는 단계;

각각의 상황에 대응하는 변형처리 단계;

실시간 정보 서버로부터 정보를 받는 단계;

현재 활성화된 윈도우창을 찾아서 핸들값을 추출하는 단계;

H 를 핸들로 하는 창의 제목표시줄에 사용자가 설정한 조건에 따라 정보를 표현하는 단계;

사용자가 트레이 아이콘을 클릭하였는지 감지하는 단계;

메뉴창을 보여주는 단계;

등록정보나 도움말을 선택하는 단계;

준비된 메시지 출력하는 단계;

제목표시줄 편집하는 단계;

출력양식을 제공받는 단계;

서버에 접속하는 단계;

실시간 정보에 접속하여 종료 후 작업전환 및 창 이동 이벤트를 감시하는 단계로 복귀하는 단계;

프로그램 종료 및 원래 값들을 복원하는 단계로 이루어져 있고 실시간 정보를 디스플레이할 수 있는 것을 특징으로 하는 윈도우즈의 제목표시줄, 작업표시줄 및 트레이 시계상의 실시간 정보 서비스 시스템.

【청구항 3】

제 1 항에 있어서, 상기 제목표시줄은 활성화된 윈도우즈 창의 핸들값을 추출하여 이에 해당하는 창의 제목표시줄 값을 실시간으로 제공되는 정보로 대치하고 사용자가 작업 전환을 실행하여 다른 창으로 활성화 제어권이 넘어가는 경우 현재 창의 제목표시줄 값을 복원하며 사용자의 편의성을 도모하기 위하여 등록정보와 표시되는 실시간 정보의 유형을 제어하는 부분을 윈도우즈 시스템의 트레이 아이콘 형태로 제공하여 원하는 정보를 조절하는 것을 특징으로 하는 윈도우즈의 제목표시줄, 작업표시줄 및 트레이 시계상의 실시간 정보 서비스 시스템.

【청구항 4】

제 1 항에 있어서, 상기 작업표시줄은

작업표시줄에 추가되는 도구모음 표시줄 창을 생성하는 단계;

사용자가 작업표시줄에 표시되길 원하는 항목설정 및 기타 조건

설정하는 단계;

실시간 정보 서버에 접속할 ID와 비밀번호 입력하는 단계;

실시간 정보 서버에 로그인하는 단계;

왼쪽 마우스 버튼이 클릭 되었는가 확인하는 단계;

정보서버에 접속하여 상세한 정보를 화면에 제공하는 단계;

실시간 정보 서버로부터 정보를 받는 단계;

작업표시줄에 사용자가 설정한 조건에 따라 정보를 표현하는 단계;

오른쪽 마우스 버튼을 클릭하는 단계;

메뉴창을 보여주는 단계;

등록정보나 도움말을 선택하는 단계;

준비된 메시지 출력하는 단계;

작업표시줄 편집하는 단계;

서버에 접속하는 단계;

실시간 정보서버에 접속하고 종료 후 오른쪽 마우스 버튼을 클릭하는 단계로 복귀하는 단계;

프로그램 종료 및 원래의 값들을 복원하는 단계로 이루어져 있고 실시간 정보를 디스플레이할 수 있는 것을 특징으로 하는 윈도우즈의 제목표시줄, 작업표시줄 및 트레이 시계상의 실시간 정보 서비스 시스템.

【청구항 5】

제 4 항에 있어서, 상기 오른쪽 마우스 버튼을 클릭하는 단계와; 메뉴창을 보여주는 단계와; 등록정보나 도움말을 선택하는 단계와; 작업표시줄 편집하는 단계는 작업표시줄을 조정할 수 있는 것을 특징으로

하는 윈도우즈의 제목표시줄, 작업표시줄 및 트레이 시계상의 실시간 정보 서비스 시스템.

【청구항 6】

제 4 항에 있어서, 상기 등록정보나 도움말을 선택하는 단계와; 작업표시줄 편집하는 단계와; 서버에 접속하는 단계와; 프로그램 종료 및 원래의 값들을 복원하는 단계는 메뉴 선택에 따라 해당 명령을 수행할 수 있는 것을 특징으로 하는 윈도우즈의 제목표시줄, 작업표시줄 및 트레이 시계상의 실시간 정보 서비스 시스템.

【청구항 7】

제 1 항에 있어서, 상기 트레이 시계상은

사용자가 트레이에 명시되길 원하는 항목 설정 및 기타 조건 설정하는 단계;

정보 조회용 사용자 ID 와 비밀 번호를 입력하는 단계;

정보제공회사 서버에 로그인하는 단계;

정보회사로부터 시세 정보를 받는 단계;

시계 트레이에 정보 자료를 표시하는 단계;

마우스가 시계 트레이 부분에 정지하였는가 확인 단계;

시계 트레이 위에서 왼쪽 마우스 버튼이 더블 클릭 되었는가 확인 단계;

시계 트레이 위에서 왼쪽 마우스 버튼이 클릭 되었는가 확인 단계;

트레이 시스템 종료 단계;

일반적인 정보 조회 및 거래 프로그램 실행 단계 및 종료 단계

로 이루어져 있어 실시간 정보를 디스플레이할 수 있는 것을 특징으로 하는 윈도우즈의 제목표시줄, 작업표시줄 및 트레이 시계상의 실시간 정보 서비스 시스템.

【청구항 8】

제 7 항에 있어서, 상기 마우스가 시계 트레이 부분에 정지하였는가 확인 단계와, 시계 트레이 위에서 왼쪽 마우스 버튼이 더블 클릭 되었는가 확인 단계와, 시계 트레이 위에서 왼쪽 마우스 버튼이 더블 클릭 되었는가 확인 단계와, 트레이 시스템 종료 단계와, 일반적인 정보 조회 및 거래 프로그램 실행 단계 및 종료 단계는 트레이 시계를 조정할 수 있는 것을 특징으로 하는 윈도우즈의 제목표시줄, 작업표시줄 및 트레이 시계상의 실시간 정보 서비스 시스템.

ABSTRACT

The present invention relates to a real time information service system using title bar, task bar and tray clock of windows, which comprises real time information server, router, public network and personal computer. The real time information received from information server is displayed on title bar, task bar and tray clock of active windows of personal computer operating system. Therefore, it is possible to perform other works at office or home and look up new information at any time without special operation and interference of other program.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	**FOR FURTHER ACTION**	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
YL000714PCT		
International application No.	International filing date *(day/month/year)*	(Earliest) Priority Date *(day/month/year)*
PCT/KR00/00773	15 JULY 2000 (15.07.2000)	16 JULY 1999 (16.07.1999)
Applicant		
KIM, Hongil et al		

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**
   a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
   ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
   b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:
   ☐ contained in the international application in written form.
   ☐ filed together with the international application in computer readable form.
   ☐ furnished subsequently to this Authority in written form.
   ☐ furnished subsequently to this Authority in computer readable form.
   ☐ the statement that the subsequenlty furnished.written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
   ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
2. ☐ **Certain claims were found unsearchable** (See Box I).
3. ☐ **Unity of invention is lacking** (See Box II).
4. With regard to the **title,**
   ☒ the text is approved as submitted by the applicant.
   ☐ the text has been established by this Authority to read as follows:
5. With regard to the **abstract,**
   ☒ the text is approved as submitted by the applicant.
   ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.
6. The figure of the **drawing** to be published with the abstract is Figure No. _____
   ☒ as suggested by the applicant. ☐ None of the figures.
   ☐ because the applicant failed to suggest a figure.
   ☐ because this figure better characterizes the invention.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR00/00773

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 G06F 3/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimun documentation searched (classification system followed by classification symbols)

IPC7 G06K 3/14, G06F 3/03, G06F 17/50, G06T 11/80

Documentation searched other than minimun documentation to the extent that such documents are included in the fileds searched

Korean Patents and applications for inventions since 1975
Korean Utility models and applications for utility models since 1975

Electronic data base consulted during the intertnational search (name of data base and, where practicable, search trerms used)

http://www.kipo.go.kr (Domestic Search System in the Korean Industrial Property Office "window information service title control display bar"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP09-146752 (FUZITSU Co., Ltd.) 6 June 1997(06.06.97) * the whole document	1-8
A	JP07-13683 (RICOH Co., Ltd.) 17 January 1995(17.01.95) * the whole document	1-8
A	JP10-11596 (PLAZA Industry Co., Ltd.) 16 January 1998(16.01.98) * the whole document	1-8

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevence
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevence; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevence; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents,such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
24 NOVEMBER 2000 (24.11.2000)	28 NOVEMBER 2000 (28.11.2000)

Name and mailing address of the ISA/KR
Korean Industrial Property Office
Government Complex-Taejon, Dunsan-dong, So-ku, Taejon
Metropolitan City 302-701, Republic of Korea
Facsimile No. 82-42-472-7140

Authorized officer
AHN, Cheol Heung
Telephone No. 82-42-481-5785

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/KR00/00773

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP09-146752	06.06.97	None	
JP07-13683	17.01.95	None	
JP10-11596	16.01.98	None	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR00/00773

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 G06F 3/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimun documentation searched (classification system followed by classification symbols)

IPC7 G06K 3/14, G06F 3/03, G06F 17/50, G06T 11/80

Documentation searched other than minimun documentation to the extent that such documents are included in the fileds searched

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☐ Further documents are listed in the continuation of Box C.

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"E" earlier application or patent but published on or after the international filing date
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"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevence; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevence; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents,such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
24 NOVEMBER 2000 (24.11.2000)	28 NOVEMBER 2000 (28.11.2000)

Name and mailing address of the ISA/KR	Authorized officer
Korean Industrial Property Office Government Complex-Taejon, Dunsan-dong, So-ku, Taejon Metropolitan City 302-701, Republic of Korea	AHN, Cheol Heung
Facsimile No. 82-42-472-7140	Telephone No. 82-42-481-5785

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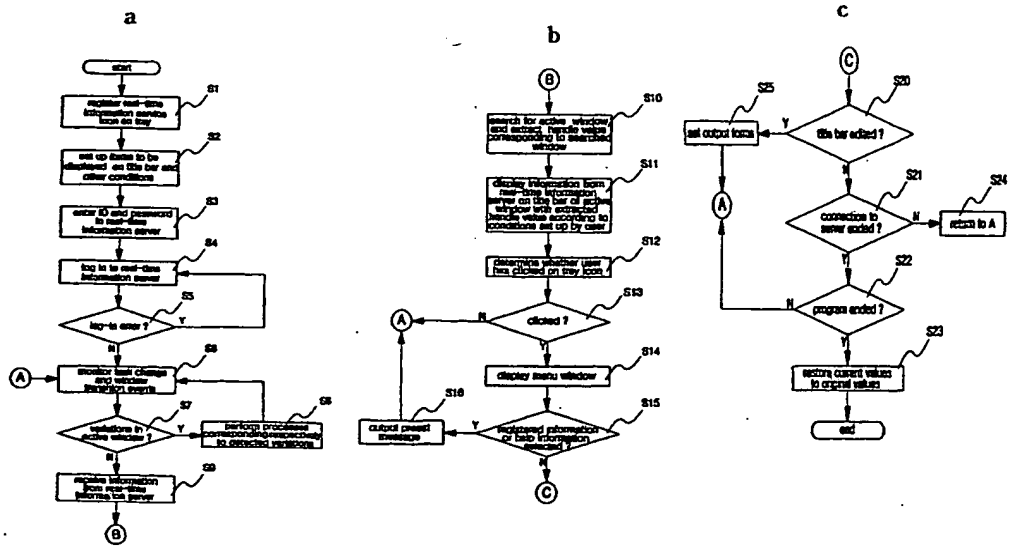
(54) Title: REAL-TIME INFORMATION SERVICE SYSTEM USING TITLE BAR, TASK BAR AND TRAY CLOCK OF WINDOWS



(57) Abstract: The present invention relates to a real-time information service system using title bar, task bar and tray clock of windows, which comprises real-time information server, router, public network and personal computer. The real-time information received from information server is displayed on title bar, task bar and tray clock of active windows of personal computer operating system. Therefore, it is possible to perform other works at office or home and look up new information at any time without special operation and interference of other program.

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REAL-TIME INFORMATION SERVICE SYSTEM USING TITLE BAR, TASK BAR AND TRAY CLOCK OF WINDOWS

Technical Field

The present invention relates in general to a real-time information service display method, and more particularly to a real-time information service system using Windows that is an operating system of a personal computer, wherein information received from an information server is displayed in real time on a title bar, task bar and tray clock of an active window of the Windows, so that a user can look up new information on the personal computer at any time without separate operations while he or she conducts other work with the computer in his office or home.

Background Art

It is common that most people acquire new information from press media or broadcasting media. At the present, some people obtain new information from cellular phones or information service media that provide an additional service such as a telephone information service.

Further, persons may make inquiries about new information from many cyber broadcasting stations or a variety of Internet information services over communication.

However, information such as a news flash from the press media or broadcasting media is disadvantageous in that it is small in amount and is not provided in real time. Further, information from the cellular phones is

disadvantageous in that it is provided on small liquid crystal display screens of the cellular phones only when users apply for the additional service. As a result, it is inconvenient for the users to make inquiries about and search for information through the cellular phones.

Furthermore, in real-time information service systems now provided by many information service companies, users must search for desired information by gaining access to hosts providing associated services or by using programs such as a Web browser. In this regard, for information searching, the users have to suspend their current work or process it in parallel with the searching operation.

Disclosure of the Invention

Therefore, the present invention has been made in view of the above problems, and it is an object of the present invention to provide a real-time information display method which is capable of receiving real-time information from an information server, storing the received information in a temporary storage unit and displaying the stored information on a title bar, task bar and tray clock of a Windows screen of a personal computer, so that a user can simply and conveniently acquire new information each time the new information is provided from the information server.

In accordance with the present invention, the above and other objects can be accomplished by a provision of a real-time information service system using a title bar, task bar and tray clock of Windows, comprising means for displaying information received from a real-time information server on the title bar in real time; means for displaying the information received from the real-time

information server on the task bar in real time; and means for displaying the information received from the real-time information server on the tray clock in real time.

Preferably, the above means for displaying the information received from the real-time information server on the title bar in real time may be programmed to extract a handle value of an active window, replace title bar information of the active window with the information received from the real-time information server, restore title bar information of a current window into the original state if the active window is changed from the current window to a different window and provide a part for controlling the type of registered information and real-time display information, in the form of an icon on a tray of a Windows system for the user's convenience, thereby allowing a user to control the type of desired information according to his or her preference using the provided tray icon.

Preferably, the above means for displaying the information received from the real-time information server on the task bar in real time may be programmed to additionally provide a window for display of real-time information from the real-time information server on the task bar, display the real-time information from the real-time information server in the provided window and allow a user to control the type of registered information and real-time display information by clicking on the task bar with a right button of a mouse, thereby providing a convenience to the user.

Preferably, the above means for displaying the information received from the real-time information server on the tray clock in real time may be programmed to describe details of an item currently displayed on the tray clock in a Windows tool description section if a mouse is positioned on the tray clock, display a general information query and transaction picture on the tray clock if a

user one-clicks on the tray clock and, if the user double-clicks on the tray clock, delete the general information query and transaction picture and display a Windows date, time and registered information picture on the tray clock.

Brief Description of the Drawings

The above and other objects, features and other advantages of the present invention will be more clearly understood from the following detailed description taken in conjunction with the accompanying drawings, in which:

Figs. 1a, 1b and 1c are flowcharts illustrating the operation of a real-time information service system which displays information on a title bar of a Windows screen of a personal computer in accordance with the preferred embodiment of the present invention;

Figs. 2a, 2b and 2c are flowcharts illustrating the operation of the real-time information service system which displays information on a task bar of the Windows screen in accordance with the preferred embodiment of the present invention; and

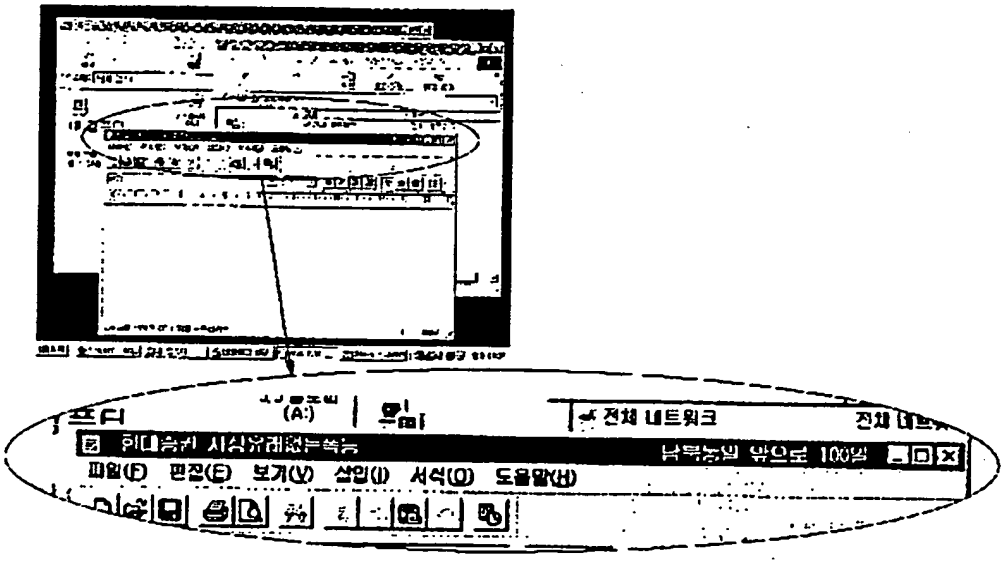
Figs. 3a and 3b are flowcharts illustrating the operation of the real-time information service system which displays information on a tray clock of the Windows screen in accordance with the preferred embodiment of the present invention.

Best Mode for Carrying Out the Invention

Figs. 1a, 1b and 1c are flowcharts illustrating the operation of a real-time information service system which displays information on a title bar of a Windows screen of a personal computer in accordance with the preferred

embodiment of the present invention. The below example 1 shows the display of information on the title bar of the Windows screen by the real-time information service system of the present invention.

EXAMPLE 1



As in the example 1, information is sent and displayed in real time on the title bar. To this end, the real-time information service system of the present invention is programmed to perform the following steps, or the step S1 of registering a real-time information service icon on a tray of a Windows system, the step S2 of setting up items to be displayed on the title bar and other conditions by a user, the step S3 of entering an identification (ID) and password in a real-time information server, the steps S4 and S5 of logging in to the real-time information server, the step S6 of monitoring task change and window transition events, the step S7 of detecting variations in an active window, the step S8 of performing processes corresponding respectively to the detected

variations in the active window, the step S9 of receiving a variety of real-time information from the real-time information server, the step S10 of searching for the active window and extracting a handle value corresponding to the searched window, the step S11 of displaying the information received from the real-time information server on the title bar of the active window with the extracted handle value according to the conditions set up by the user, the steps S12 and S13 of determining whether the user has clicked on the registered real-time information service icon on the tray, the step S14 of displaying a menu window, the step S15 of selecting registered information or help information in the displayed menu window, the step S16 of outputting a preset message, the step S20 of editing the contents of the title bar, the step S25 of setting output forms, the step S21 of ending the connection to the real-time information server, the step S24 of, if the connection to the real-time information server is not ended, returning to the above step S6 of monitoring the task change and window transition events, and the steps S22 and S23 of, if the connection to the real-time information server is ended, ending an associated program and restoring the current values to the original values. By performing these steps, the real-time information service system can display a variety of information and data from the real-time information server on the title bar of the active window of the Windows in real time.

At the step S1 of registering the real-time information service icon on the tray, the system provides a part for controlling the type of registered information and real-time display information, in the form of an icon on the tray of the Windows system for the user's convenience. As a result, the user can control the type of desired information according to his or her preference using the provided tray icon.

At the step S2 of setting up the items to be displayed on the title bar and other conditions by the user, an additional service manager provides an alarm such as a sound or picture change when given conditions are identical to the conditions set up by the user.

At the step S3 of entering the ID and password in the real-time information server, the user enters his or her ID and password in the real-time information server so that news or advertisements from the server can be provided on the title bar.

At the steps S4 and S5 of logging in to the real-time information server, the user logs in to the real-time information server by entering his or her ID and password in the server. The user can receive a variety of information from the real-time information server by logging in to the server.

At the step S6 of monitoring the task change and window transition events, the system monitors an event where the user moves a task from one window, for example, a Windows searcher window to a different window, for example, a control panel window.

At the step S7 of detecting the variations in the active window, the system detects the variations in the active window such as a transition of the active window from one window, for example, the Windows searcher window to a different window, for example, the control panel window. Here, the active window signifies a window that performs a task currently given by the user and displays real-time information from the real-time information server.

At the step S8 of performing the processes corresponding to the detected variations in the active window, if the active window is changed in size, it is changed from one window to another window, the user changes a title bar in position using a mouse, or a new icon is registered and located on the tray, then

the system changes the title bar in size and sets the range of information display according to the changed size of the title bar.

At the step S9 of receiving the real-time information from the real-time information server, the system receives a variety of information, such as stock market information, advertisements, news flashes, character broadcasts, etc., from the real-time information server.

At the step S10 of searching for the active window and extracting the handle value corresponding to the searched window, a task manager is adapted to extract the handle value of the active window.

At the step S11 of displaying the information received from the real-time information server on the title bar of the active window with the extracted handle value according to the conditions set up by the user, the system searches for an item in a menu window, selected by the user using the mouse, and displays the received information according to the selected item and the set-up conditions.

At the steps S12 and S13 of determining whether the user has clicked on the registered real-time information service icon on the tray, the system determines whether the user has clicked on the tray icon for controlling the type of real-time information. Upon determining that the user has not clicked on the tray icon, the system returns to the above step S6 of monitoring the task change and window transition events.

At the step S14 of displaying the menu window, the system displays the menu window, which contains a variety of menus such as registered information, help information, title bar edition, real-time information service connection, connection end, etc.

At the step S15 of selecting the registered information or help

information in the displayed menu window, the system outputs a preset message if the user selects the registered information or help information in the displayed menu window. Otherwise, the system proceeds to the step S20 of editing the contents of the title bar.

At the step S16 of outputting the preset message, the system displays the contents of preset information from an information source.

At the step S20 of editing the contents of the title bar, the system edits and provides output forms of various information on the title bar.

At the step S25 of setting the output forms, the system sets output forms of information displayed on the title bar, for example, a character stream expression such as an electric stock market board (i.e., a ticker), a character blinking expression, etc.

At the step S21 of ending the connection to the real-time information server, if the user ends the connection to the real-time information server under the condition that any output form is not provided at the above step S20 of editing the contents of the title bar, then the system ends an associated program. However, unless the user ends the connection to the real-time information, the system returns to the above step S6 of monitoring the task change and window transition events.

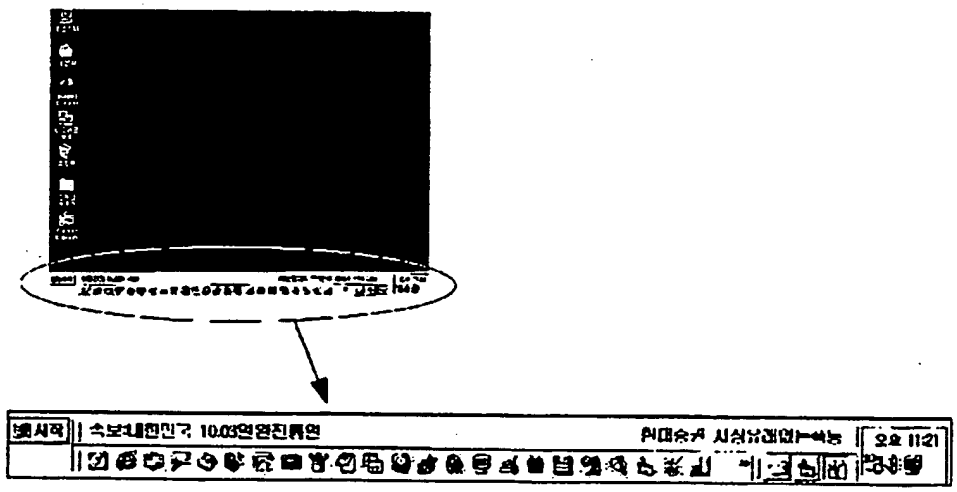
At the step S24 of, if the connection to the real-time information server is not ended, returning to the above step S6 of monitoring the task change and window transition events, the system extracts a handle value of the active window, compares the extracted handle value with that of a window in which information is currently displayed and determines from the compared result whether there is a variation in the handle value of the active window. If there is a variation in the handle value of the active window, the system changes this

handle value such that information is always displayed on the title bar of the active window.

At the steps S22 and S23 of, if the connection to the real-time information server is ended, ending the associated program and restoring the current values to the original values, if a sequence of predetermined steps are completed, then the system ends the associated program and restores the current values to the original values.

Figs. 2a, 2b and 2c are flowcharts illustrating the operation of the real-time information service system which displays information on a task bar of a Windows screen of a personal computer in accordance with the preferred embodiment of the present invention. The below example 2 shows the display of information on the task bar of the Windows screen by the real-time information service system of the present invention.

EXAMPLE 2



As in the example 2, information is sent and displayed in real time on the

task bar. To this end, the real-time information service system of the present invention is programmed to perform the following steps, or the step S30 of creating an additional tool bar window on the task bar, the step S31 of setting up items to be displayed on the task bar and other conditions by a user, the step S32 of entering an ID and password in a real-time information server, the steps S33 and S34 of logging in to the real-time information server, the step S35 of determining whether the user has operated the left button of a mouse, the step S36 of gaining access to the real-time information server and providing detailed information from the server to the screen, the step S37 of receiving a variety of real-time information from the real-time information server, the step S40 of displaying the information received from the real-time information server on the task bar according to the conditions set up by the user, the step S41 of determining whether the user has operated the right button of the mouse, the step S42 of displaying a menu window, the step S43 of selecting registered information or help information in the displayed menu window, the step S44 of outputting a preset message, the step S50 of editing the contents of the task bar, the step S55 of setting output forms, the step S51 of ending the connection to the real-time information server, the step S52 of, if the connection to the real-time information server is not ended, returning to the above step S35 of determining whether the user has operated the left button of the mouse, and the steps S53 and S54 of, if the connection to the real-time information server is ended, ending an associated program and restoring the current values to the original values. By performing these steps, the real-time information service system can display a variety of information and data from the real-time information server on the task bar in real time.

At the step S30 of creating the additional tool bar window on the task

bar, the system creates the additional tool bar window on the bottom of a monitored picture and, in turn, the task bar above the tool bar window.

At the step S31 of setting up the items to be displayed on the task bar and other conditions by the user, an additional service manager provides an alarm such as a sound or picture change when given conditions are identical to the conditions set up by the user.

At the step S32 of entering the ID and password in the real-time information server, the user enters his or her ID and password in the real-time information server so that news or advertisements from the server can be provided on the task bar.

At the steps S33 and S34 of logging in to the real-time information server, the user logs in to the real-time information server by entering his or her ID and password in the server. The user can receive a variety of information from the real-time information server by logging in to the server.

At the step S35 of determining whether the user has operated the left button of the mouse, the system displays a menu window containing a variety of menus such as registered information, help information, task bar edition, real-time information service connection, connection end, etc. such that the user clicks on a desired item in the displayed menu window with the left button of the mouse. Then, the system detects the item selected by the user and executes a command associated with the detected item.

At the step S36 of gaining access to the real-time information server and providing detailed information from the server to the screen, the system gains access to the real-time information server and displays desired details from the server on the screen.

At the step S37 of receiving the real-time information from the real-time

information server, the system receives a variety of information, such as stock market information, advertisements, news flashes, character broadcasts, etc., from the real-time information server.

At the step S40 of displaying the information received from the real-time information server on the task bar according to the conditions set up by the user, the system determines whether the user has accessed the real-time information server via not an Internet dedicated line but a modem and then displays news, stock market quotations, sports, government, economy and other information from the server on the task bar if the user has accessed the server via the modem.

At the step S41 of determining whether the user has operated the right button of the mouse, if the user operates the right button of the mouse on a desired tool bar window or clicks on an icon registered on a tray, then the system controls the type of registered information and real-time display information.

At the step S42 of displaying the menu window, the system displays the menu window, which contains a variety of menus such as registered information, help information, task bar edition, real-time information service connection, connection end, etc.

At the step S43 of selecting the registered information or help information in the displayed menu window, the system outputs a preset message if the user selects the registered information or help information in the displayed menu window. Otherwise, the system proceeds to the step S50 of editing the contents of the task bar.

At the step S44 of outputting the preset message, the system displays the contents of preset information from an information source.

At the step S50 of editing the contents of the task bar, the system edits and provides output forms of various information on the task bar.

At the step S55 of setting the output forms, the system sets output forms of various information displayed on the task bar, for example, a character stream expression such as an electric stock market board, a character blinking expression, etc.

At the step S51 of ending the connection to the real-time information server, if the user ends the connection to the real-time information server under the condition that any output form is not provided at the above step S50 of editing the contents of the task bar, then the system ends an associated program. However, unless the user ends the connection to the real-time information, the system returns to the above step S35 of determining whether the user has operated the left button of the mouse.

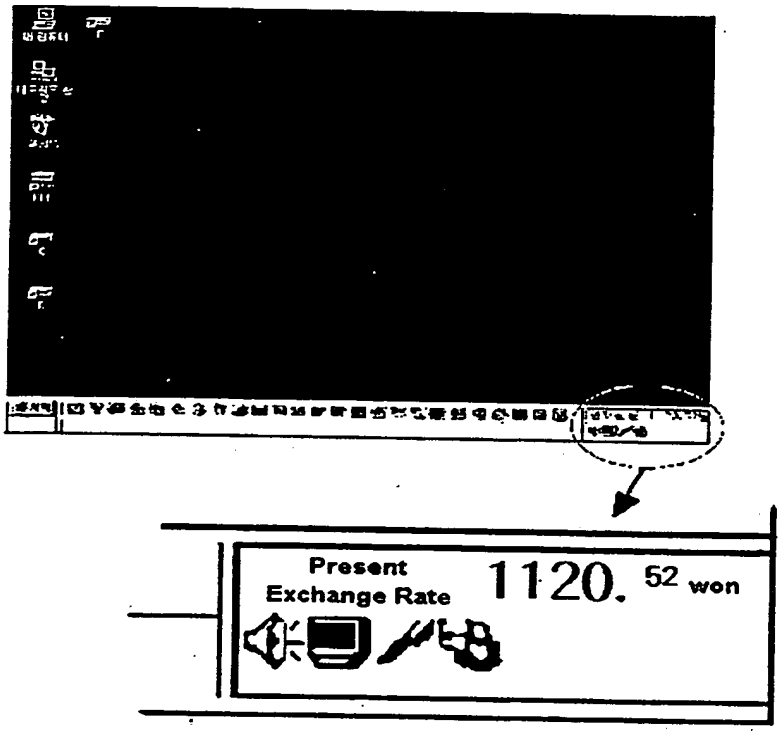
At the step S52 of, if the connection to the real-time information server is not ended, returning to the above step S35 of determining whether the user has operated the left button of the mouse, the system acquires real-time information from the real-time information server and determines whether the user has operated the left button of the mouse.

At the steps S53 and S54 of, if the connection to the real-time information server is ended, ending the associated program and restoring the current values to the original values, if a sequence of predetermined steps are completed, then the system ends the associated program and restores the current values to the original values.

Figs. 3a and 3b are flowcharts illustrating the operation of the real-time information service system which displays information on a tray clock of a Windows screen of a personal computer in accordance with the preferred embodiment of the present invention. The below example 3 shows the display of information on the tray clock of the Windows screen by the real-time

information service system of the present invention.

EXAMPLE 3



As in the example 3, information is sent and displayed in real time on the tray clock. To this end, the real-time information service system of the present invention is programmed to perform the following steps, or the step S60 of setting up items to be displayed on the tray clock and other conditions by a user, the step S61 of entering an ID and password in a real-time information server, the steps S62 and S63 of logging in to the real-time information server, the step S64 of receiving a variety of real-time information from the real-time information server, the step S65 of displaying the information received from the real-time information server on the tray clock, the step S70 of determining whether a mouse is positioned on the tray clock, the step S77 of describing

details of an item currently displayed on the tray clock in a Windows tool description section, the step S71 of determining whether the user has double-clicked on the tray clock with the left button of the mouse, the step S76 of executing Windows date, time and registered information programs, the step S72 of determining whether the user has clicked on the tray clock with the left button of the mouse, the step S73 of ending a tray system, and the steps S74, S75 and S76 of executing and ending general information query and transaction programs. By performing these steps, the real-time information service system can display a variety of information and data from the real-time information server on the tray clock in real time.

At the step S60 of setting up the items to be displayed on the tray clock and other conditions by the user, the user selects a real-time information server and sets up associated conditions to display a variety of information from the server on the tray clock, which is located at the rightmost position of a task bar.

At the step S61 of entering the ID and password in the real-time information server, the user enters his or her ID and password in the real-time information server so that information from the server can be provided on the tray clock.

At the steps S62 and S63 of logging in to the real-time information server, the user logs in to the real-time information server by entering his or her ID and password in the server. The user can receive a variety of information from the real-time information server by logging in to the server.

At the step S64 of receiving the real-time information from the real-time information server, the system searches information from the real-time information server for desired information and downloads the searched information.

At the step S65 of displaying the information received from the real-time information server on the tray clock, the system displays news, stock market quotations and other information from the real-time information server in character form. The system further provides an alarm such as a color, sound or picture change when given conditions are identical to the conditions set up by the user.

At the step S70 of determining whether the mouse is positioned on the tray clock, the system describes details of an item currently displayed on the tray clock in a Windows tool description section if the mouse is positioned on the tray clock. If the mouse moves from the tray clock, then the system proceeds to the log-in step. In the case where the mouse is not positioned on the tray clock, the system proceeds to the step S71 of determining whether the user has double-clicked on the tray clock with the left button of the mouse.

At the step S77 of describing the details of the item currently displayed on the tray clock in the Windows tool description section, the system describes the details of the item currently displayed on the tray clock in the form of a Windows tool tip.

At the step S71 of determining whether the user has double-clicked on the tray clock with the left button of the mouse, the real-time information service system ends a tray system if the user has double-clicked on the tray clock with the left button of the mouse. However, if the user has not double-clicked on the tray clock with the left button of the mouse, the real-time information service system proceeds to the log-in step.

At the step S76 of executing the Windows date, time and registered information programs, if the user double-clicks on the tray clock with the left button of the mouse, then the system receives information from the real-time

information server over the Internet, transforms the received information into the Windows date, time and registered information programs and executes the transformed programs.

At the step S72 of determining whether the user has clicked on the tray clock with the left button of the mouse, the user can change the above display method or associated registered information according to his or her preference.

At the step S73 of ending the tray system, the system executes general information query and transaction programs if the tray system is not ended.

At the steps S74, S75 and S76 of executing and ending the general information query and transaction programs, the system installs and executes the general information query and transaction programs to inquire about desired information and conduct transactions and then ends those programs if the query and transactions are completed.

Industrial Applicability

As apparent from the above description, the present invention provides a real-time information service system which is capable of displaying real-time information on a title bar, task bar and tray clock of an active window of a Windows system, so that a user can conveniently search for the real-time information without interferences with other programs. Therefore, this invention is very usefully applicable to computer application programming technical fields.

The present real-time information service system provides, rather than simple contents such as titles of programs, information useful to modern persons using the Internet and computers in daily life. Therefore, the present invention

is very useful in providing users with a variety of real-time information such as stock market quotations, sports, government, economy, news flashes, advertisements of simple phrases or sentences, character broadcasts, etc. provided from companies and public institutions having real-time information servers.

Although the preferred embodiments of the present invention have been disclosed for illustrative purposes, those skilled in the art will appreciate that various modifications, additions and substitutions are possible, without departing from the scope and spirit of the invention as disclosed in the accompanying claims.

Claims:

1. A real-time information service system using a title bar, task bar and tray clock of Windows, comprising:

means for displaying information received from a real-time information server on said title bar in real time;

means for displaying the information received from said real-time information server on said task bar in real time; and

means for displaying the information received from said real-time information server on said tray clock in real time.

2. The real-time information service system as set forth in Claim 1, wherein said means for displaying the information received from said real-time information server on said title bar in real time is programmed to execute the steps of:

a) registering a real-time information service icon on a tray of a Windows system;

b) setting up items to be displayed on said title bar and other conditions by a user;

c) entering an identification and password in said real-time information server;

d) logging in to said real-time information server;

e) monitoring task change and window transition events;

f) detecting variations in an active window;

g) performing processes corresponding respectively to the detected variations in said active window;

h) receiving a variety of real-time information from said real-time information server;

i) searching for said active window and extracting a handle value corresponding to the searched window;

j) displaying the information received from said real-time information server on said title bar of said active window with the extracted handle value according to the conditions set up by the user;

k) determining whether the user has clicked on the registered real-time information service icon on said tray;

l) displaying a menu window;

m) selecting registered information or help information in the displayed menu window;

n) outputting a preset message;

o) editing the contents of said title bar;

p) setting output forms;

q) ending connection to said real-time information server;

r), if the connection to the real-time information server is not ended, returning to said step e) of monitoring the task change and window transition events; and

s), if the connection to the real-time information server is ended, ending an associated program and restoring the current values to the original values.

3. The real-time information service system as set forth in Claim 1, wherein said means for displaying the information received from said real-time information server on said title bar in real time is programmed to extract a handle value of an active window, replace title bar information of said active

window with the information received from said real-time information server, restore title bar information of a current window into the original state if said active window is changed from the current window to a different window and provide a part for controlling the type of registered information and real-time display information, in the form of an icon on a tray of a Windows system for the user's convenience, thereby allowing a user to control the type of desired information according to his or her preference using the provided tray icon.

4. The real-time information service system as set forth in Claim 1, wherein said means for displaying the information received from said real-time information server on said task bar in real time is programmed to execute the steps of:

a) creating an additional tool bar window on said task bar;

b) setting up items to be displayed on said task bar and other conditions by a user;

c) entering an identification and password in said real-time information server;

d) logging in to said real-time information server;

e) determining whether the user has operated a left button of a mouse;

f) gaining access to said real-time information server and providing detailed information from said server to a screen;

g) receiving a variety of real-time information from said real-time information server;

h) displaying the information received from said real-time information server on said task bar according to the conditions set up by the user;

i) determining whether the user has operated a right button of the mouse;

j) displaying a menu window;

k) selecting registered information or help information in the displayed menu window;

l) outputting a preset message;

m) editing the contents of said task bar;

n) ending connection to said real-time information server;

o), if the connection to said real-time information server is not ended, returning to said step e) of determining whether the user has operated the left button of the mouse; and

p), if the connection to said real-time information server is ended, ending an associated program and restoring the current values to the original values.

5. The real-time information service system as set forth in Claim 4, wherein said step i) of determining whether the user has operated the right button of the mouse, said step j) of displaying the menu window, said step k) of selecting the registered information or help information in the displayed menu window and said step m) of editing the contents of said task bar are executed to control the display of information on said task bar.

6. The real-time information service system as set forth in Claim 4, wherein said step k) of selecting the registered information or help information in the displayed menu window, said step m) of editing the contents of said task bar, said step n) of ending the connection to said real-time information server and said step p) of, if the connection to said real-time information server is ended, ending the associated program and restoring the current values to the original values are executed to perform commands associated with menu items

selected by the user.

7. The real-time information service system as set forth in Claim 1, wherein said means for displaying the information received from said real-time information server on said tray clock in real time is programmed to execute the steps of:

a) setting up items to be displayed on said tray clock and other conditions by a user;

b) entering an identification and password in said real-time information server;

c) logging in to said real-time information server;

d) receiving a variety of real-time information from said real-time information server;

e) displaying the information received from said real-time information server on said tray clock;

f) determining whether a mouse is positioned on said tray clock;

g) determining whether the user has double-clicked on said tray clock with a left button of the mouse;

h) determining whether the user has clicked on said tray clock with the left button of the mouse;

i) ending a tray system; and

j) executing and ending general information query and transaction programs.

8. The real-time information service system as set forth in Claim 7, wherein said step f) of determining whether the mouse is positioned on said tray clock, said step g) of determining whether the user has double-clicked on said

tray clock with the left button of the mouse, said step h) of determining whether the user has clicked on said tray clock with the left button of the mouse, said step i) of ending the tray system and said step j) of executing and ending the general information query and transaction programs are executed to control the display of information on said tray clock.

Fig. 1a

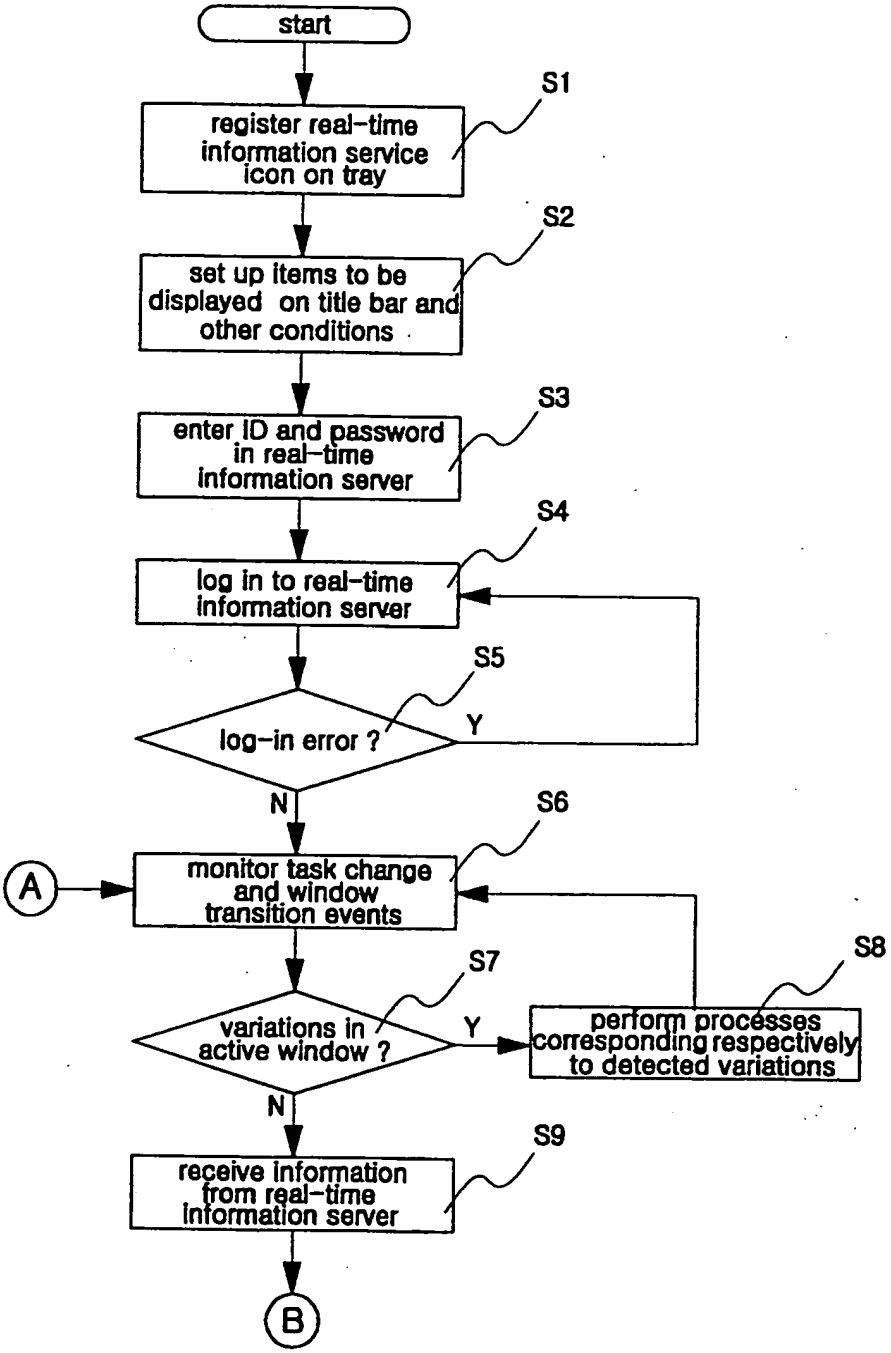

start
register real-time information service icon on tray
S1
set up items to be displayed on title bar and other conditions
S2
enter ID and password in real-time information server
S3
log in to real-time information server
S4
log-in error ?
S5
Y
N
A
monitor task change and window transition events
S6
variations in active window ?
S7
Y
perform processes corresponding respectively to detected variations
S8
N
receive information from real-time information server
S9
B

Fig. 1b

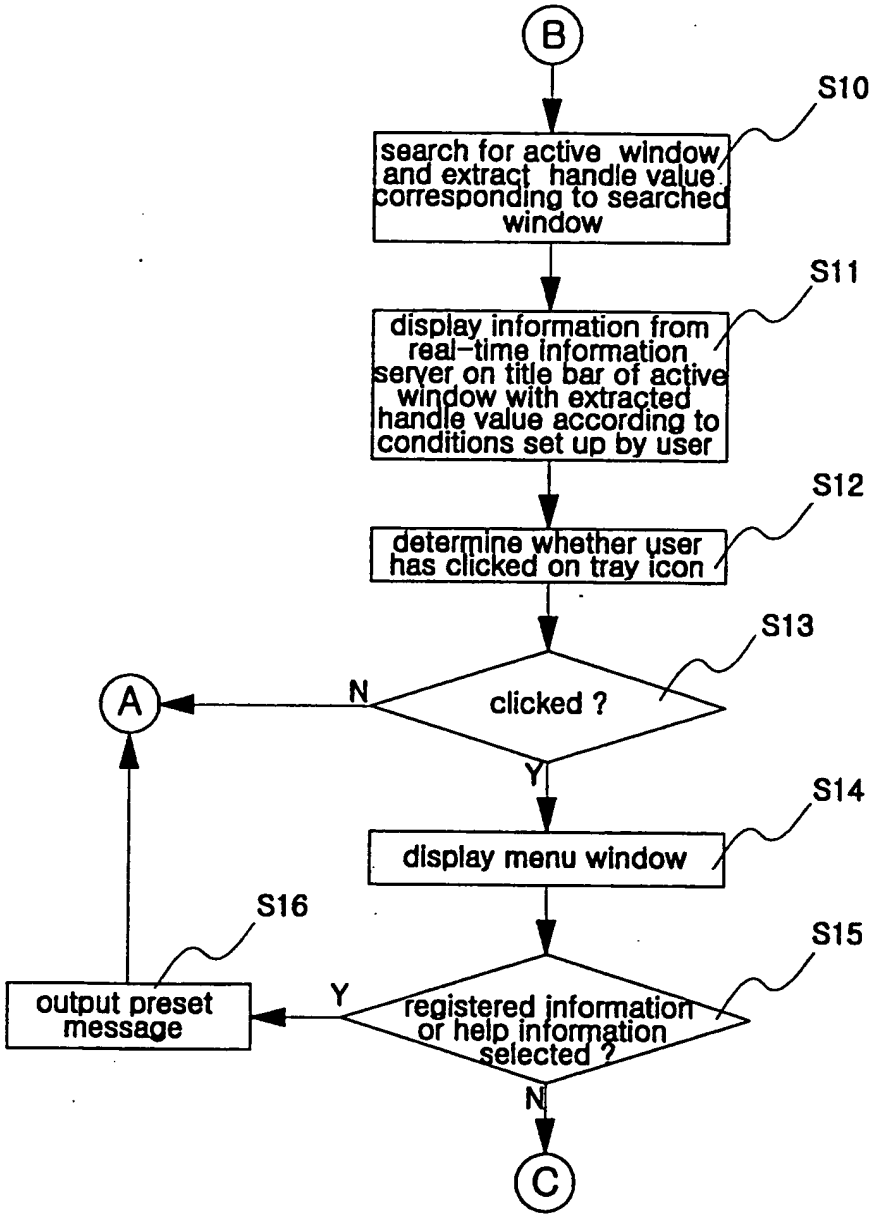

B
S10
search for active window and extract handle value corresponding to searched window
S11
display information from real-time information server on title bar of active window with extracted handle value according to conditions set up by user
S12
determine whether user has clicked on tray icon
S13
clicked ?
N
A
Y
S14
display menu window
S15
registered information or help information selected ?
Y
S16
output preset message
N
C

Fig. 1c

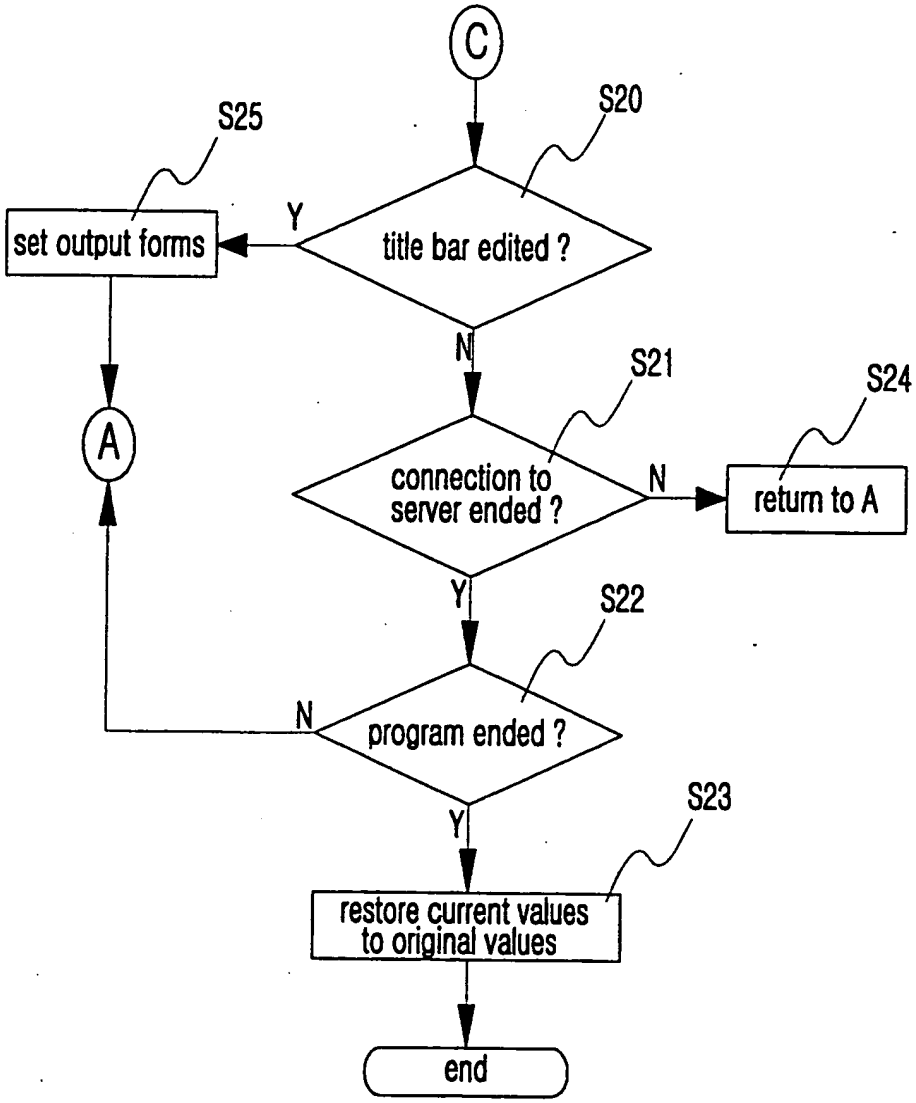

C
S20
title bar edited ?
Y
S25
set output forms
N
S21
connection to server ended ?
N
S24
return to A
A
Y
S22
program ended ?
N
Y
S23
restore current values to original values
end

Fig. 2a

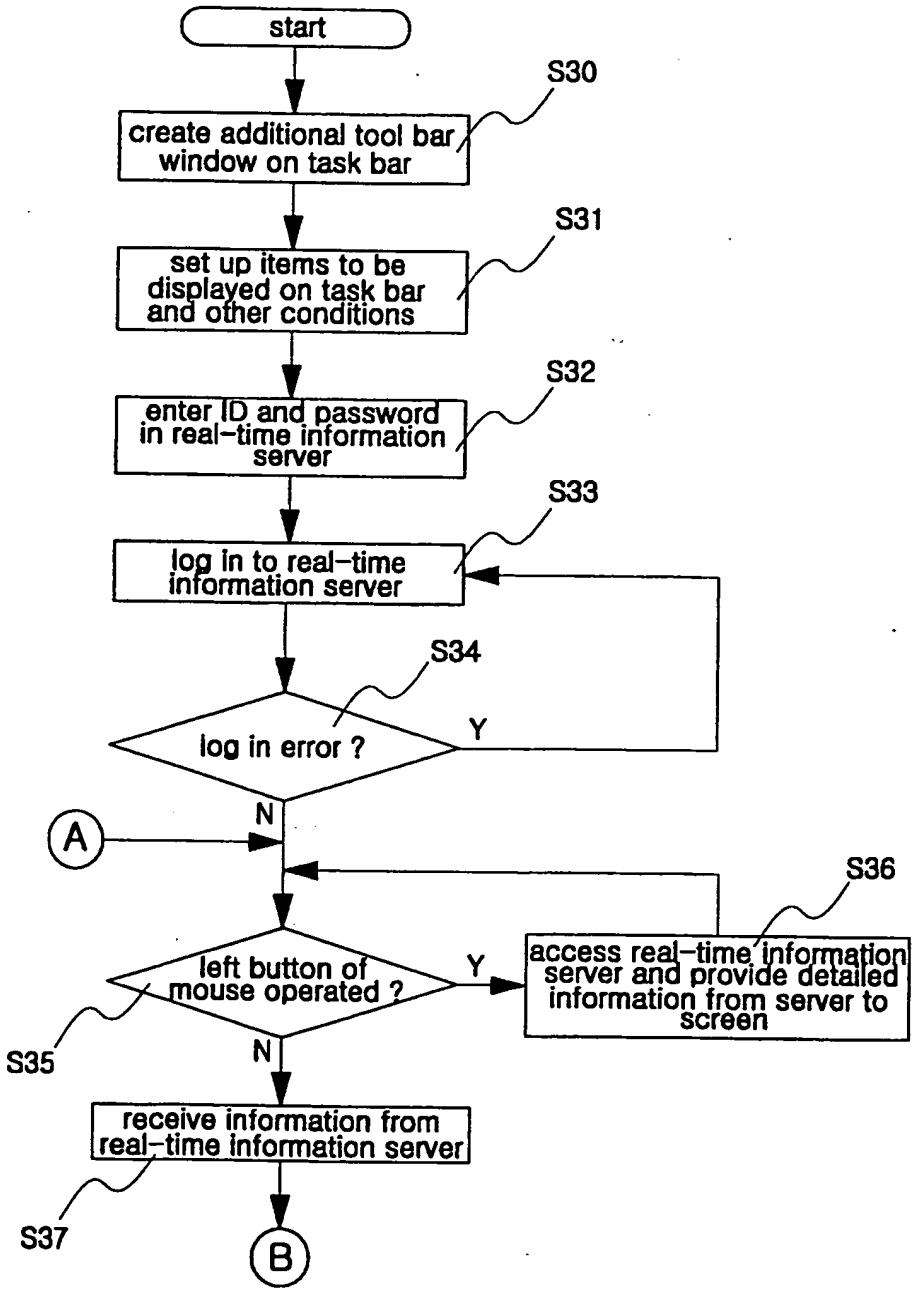

start
S30
create additional tool bar window on task bar
S31
set up items to be displayed on task bar and other conditions
S32
enter ID and password in real-time information server
S33
log in to real-time information server
S34
log in error ?
Y
N
A
S36
left button of mouse operated ?
Y
access real-time information server and provide detailed information from server to screen
S35
N
receive information from real-time information server
S37
B

Fig. 2b

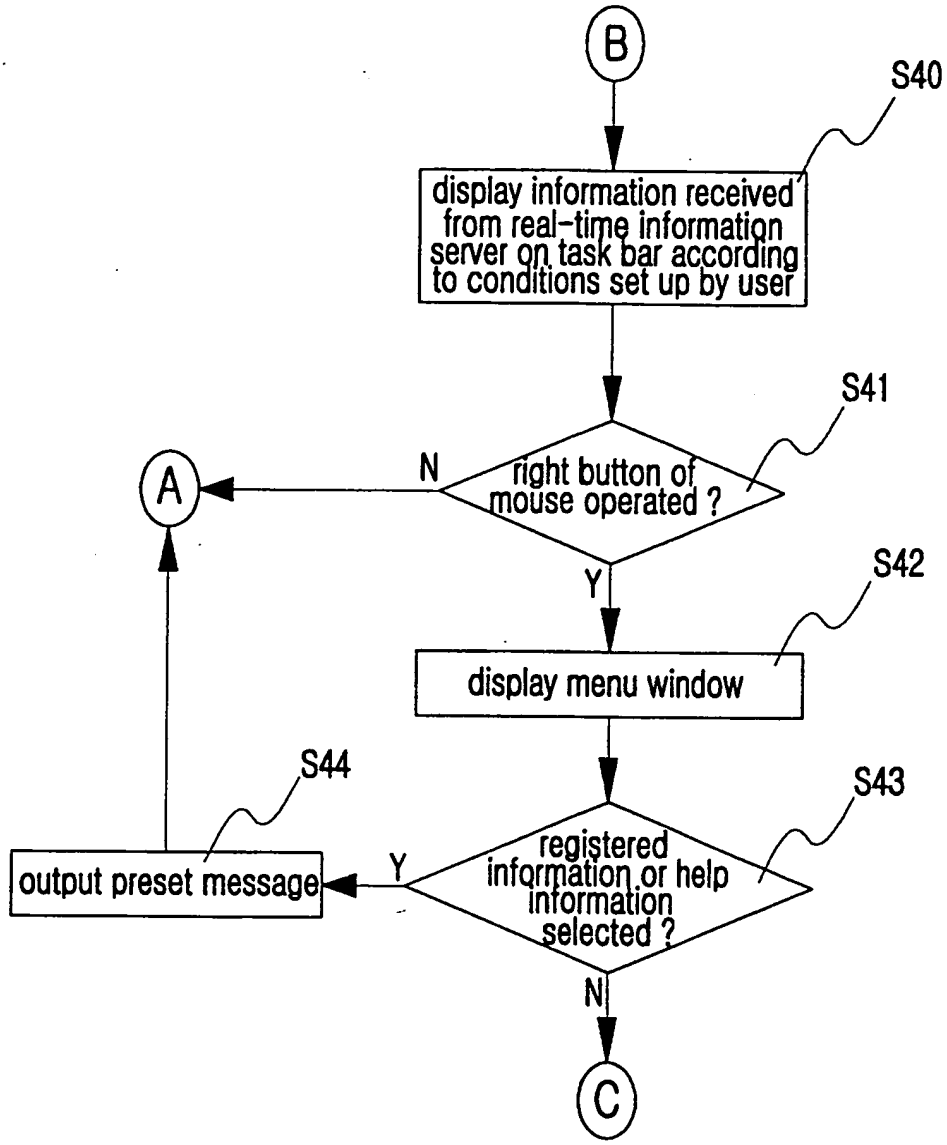

B
S40
display information received from real-time information server on task bar according to conditions set up by user
S41
right button of mouse operated ?
N
A
Y
S42
display menu window
S43
registered information or help information selected ?
Y
S44
output preset message
N
C

Fig. 2c

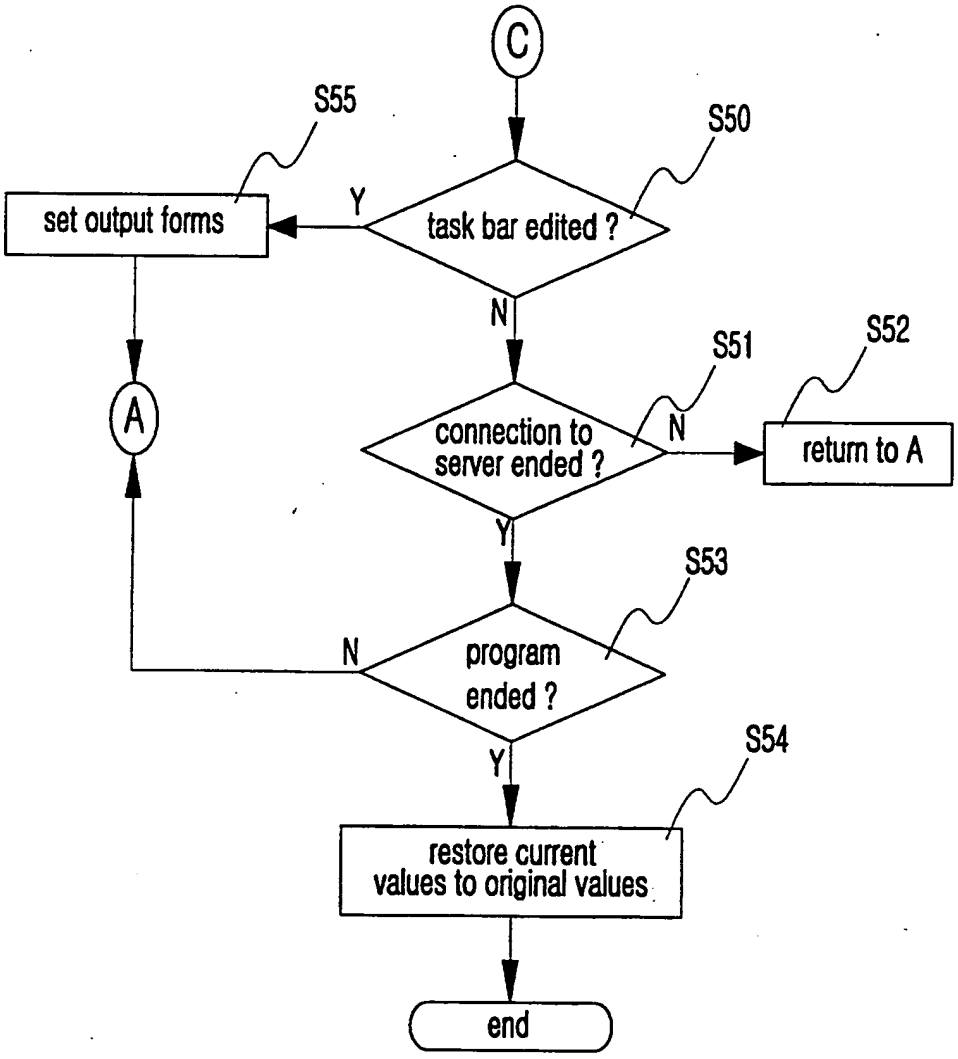

C
S55
S50
set output forms
Y
task bar edited ?
N
S51
S52
A
connection to server ended ?
N
return to A
Y
S53
N
program ended ?
Y
S54
restore current values to original values
end

Fig. 3a

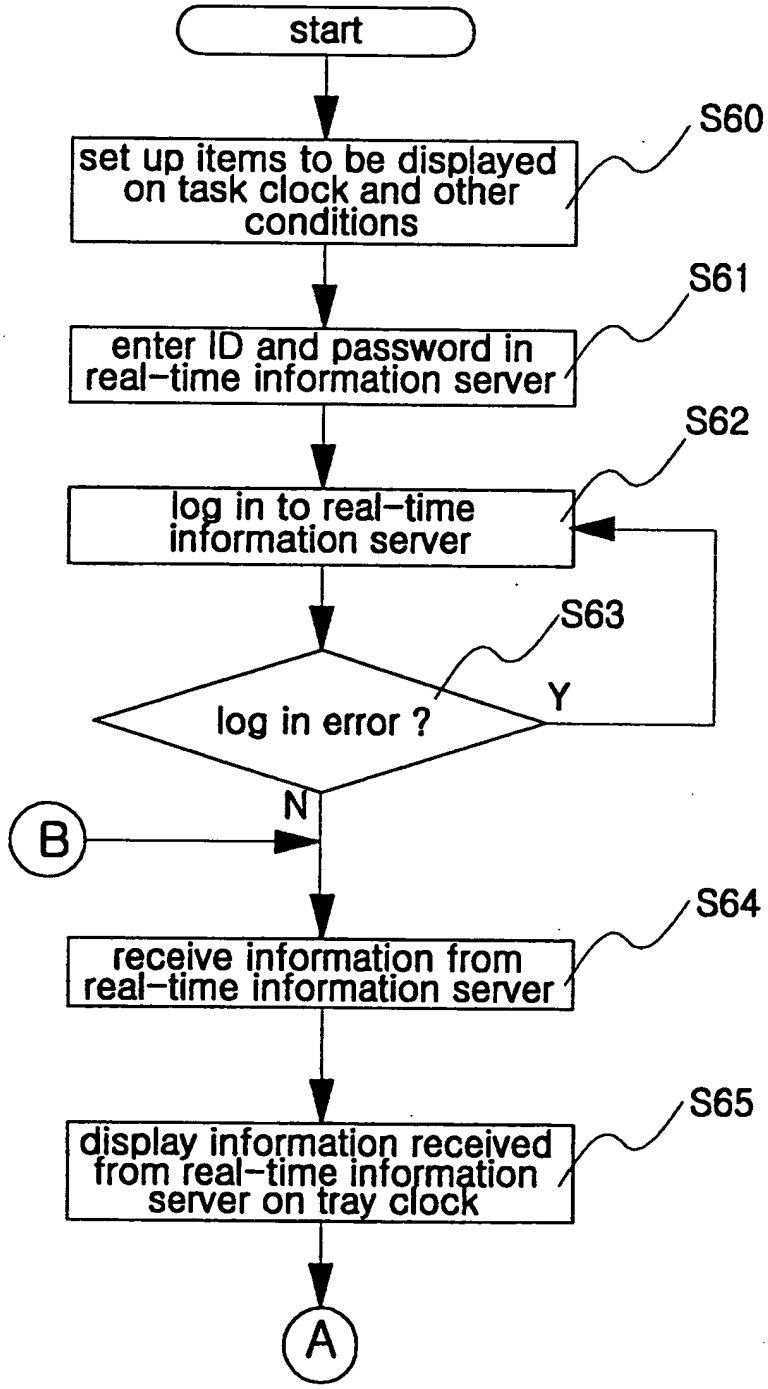
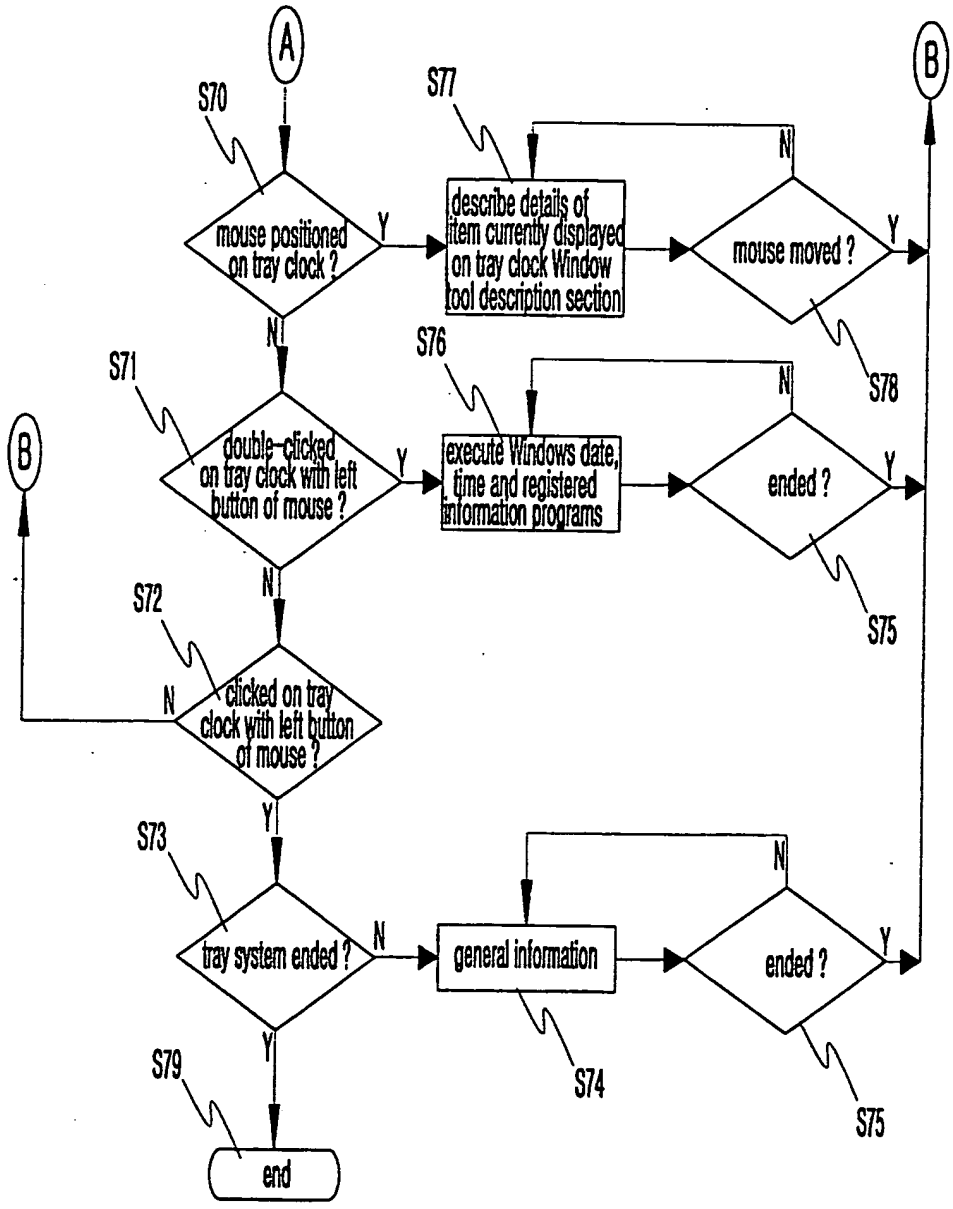

start
S60
set up items to be displayed on task clock and other conditions
S61
enter ID and password in real-time information server
S62
log in to real-time information server
S63
log in error ?
Y
N
B
S64
receive information from real-time information server
S65
display information received from real-time information server on tray clock
A

Fig. 3b


A
B
S70
mouse positioned on tray clock ?
Y
N
S77
describe details of item currently displayed on tray clock Window tool description section
mouse moved ?
Y
N
S78
S71
double-clicked on tray clock with left button of mouse ?
Y
N
S76
execute Windows date, time and registered information programs
ended ?
Y
N
S75
S72
clicked on tray clock with left button of mouse ?
N
Y
S73
tray system ended ?
N
Y
S74
general information
ended ?
Y
N
S75
S79
end

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR00/00773

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 G06F 3/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimun documentation searched (classification system followed by classification symbols)
IPC7 G06K 3/14, G06F 3/03, G06F 17/50, G06T 11/80

Documentation searched other than minimun documentation to the extent that such documents are included in the fileds searched
Korean Patents and applications for inventions since 1975
Korean Utility models and applications for utility models since 1975

Electronic data base consulted during the intertnational search (name of data base and, where practicable, search trerms used)
http://www.kipo.go.kr (Domestic Search System in the Korean Industrial Property Office "window information service title control display bar"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP09-146752 (FUZITSU Co., Ltd.) 6 June 1997(06.06.97) * the whole document	1-8
A	JP07-13683 (RICOH Co., Ltd.) 17 January 1995(17.01.95) * the whole document	1-8
A	JP10-11596 (PLAZA Industry Co., Ltd.) 16 January 1998(16.01.98) * the whole document	1-8

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevence
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevence; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevence; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents,such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
24 NOVEMBER 2000 (24.11.2000)	28 NOVEMBER 2000 (28.11.2000)

Name and mailing address of the ISA/KR	Authorized officer
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/KR00/00773

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP09-146752	06.06.97	None	
JP07-13683	17.01.95	None	
JP10-11596	16.01.98	None	